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1306

PUBLIC EDUCATION.

Serfojee Rajah. 1829

PLANS

FOR

THE GOVERNMENT

AND

LIBERAL INSTRUCTION

OF

BOYS,

IN LARGE NUMBERS;

DRAWN FROM EXPERIENCE.

1306

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PREFACE.

The little work which we now send into the reader's hands cannot boast of much regularity, either in its design or execution. In fact it is published with a very different intention to that in which the greater part of it was written; for our original object was merely to defend our system against the prejudices which naturally, and we had almost said properly, attend innovation.

We found it too great a tax upon our time to answer objections *viva voce*, and thought that by arranging our arguments on paper, we should obtain our purpose more easily and completely to all parties. Fortunately for us, this reason for writing very soon ceased to exist. We then extended our range, proceeded to detail our plans more fully, and to enter more at large into the *rationale* of our system, which itself, as might naturally be expected, was more boldly developed in practice.

Having satisfied our minds that our general theory was correct, by a long course of experiments, and by the acquiescence of those who are so much interested in a careful and even rigorous examination of our plans, we have latterly proceeded without the trepidation which at first attended us at every step, and rendered the task of reducing the convictions of our minds to practice a tedious and painful operation.

We now feel our system to be sufficiently matured for public inspection; not that it is incapable of infinite improvement. We are far from pretending to a state of perfection, that we should belie daily by the changes which we still find it expedient to introduce; but there is a wide difference between alterations which proceed from the adoption of new principles, and those which are in furtherance of old ones. The latter will become gradually more and more minute, until they cease altogether to affect any of the important features. We never expect, and, indeed, never wish the time to arrive, when changes shall cease to be made; for to learn the art of improving the methods by which the business of a schoolboy is transacted is an excellent means for him to acquire the power of bettering plans in after-life. We have

been astonished to find the ease with which, by practice, boys conform to new modes, without the loss of time and the confusion which may be supposed to attend any changes affecting a large number. It is almost needless to observe, that much good must result from leading boys thus to compare one method with another, or, in other words, to reason for themselves upon the *science* of education; a subject to which the reader will find us often endeavouring to call the attention of our pupils.

The slightest examination of the following pages will show that we have not attempted to lay down a general system of education. Our attention has, both from necessity and inclination, been confined to the instruction and government of *boys* at *school*. With the education of females, or of boys before the time at which they come under our care, we had obviously nothing to do; yet, as the principles on which we have acted are drawn from a consideration of human nature generally, many of them (if they are true) may undoubtedly be applied without distinction of either age or sex. We have not thought it necessary to dwell on, or in many cases even to advert to, those branches of instruction on which we had nothing new to offer. We have

no ambition to repeat "what oft was said and often *better* expressed." Indeed there was little temptation for us to trench upon the province of others; for numerous and excellent as are the writers on education, they have seldom been practical men, possessing the advantage of trying experiments in the science, and have consequently left us a field sufficiently large. We do not see why the principles of the inductive philosophy should not be as rigidly followed in education, as in any other department of human knowledge. As it respects ourselves, we must honestly confess that we retain hardly a single opinion relating to any part of our profession, which we held in early life; one by one, we have surrendered them all to the force of experience.

Miss Edgeworth, in her life of her father,* very properly considers the value of his services in the cause of education greatly enhanced by their consisting very much in experiments accurately recorded. We hope the path which Mr. Edgeworth struck out will be more frequently trodden than it has been. In one respect we have enjoyed greater advantages than he for making observations. We have

* Vol. ii. p. 187.

had a larger number of pupils, all differing in their natural and acquired powers, and without that family resemblance which must have run through the subjects of his investigations; and therefore likely to furnish more correct *average* results than can be reasonably expected in his case.

The reader will naturally wish to know, before he undertakes the task of reading the following chapters, what is the object which we have had before us in the road that we have chalked out. We shall be able to satisfy his curiosity in a few sentences; and first, let us say what our object is *not*. It is not to change the course of Nature by transmuting boys into *little men*. It is not to enable our pupils to hide the meagreness of their stock, by the dexterity with which they may display their wares; not to lead a boy to imagine that his education is finished, because he has arrived at a certain age; not for him to suppose, that to talk fluently can be any excuse for not thinking deeply; or that manners may be a succedaneum for conduct. On the other hand, what we do aim at effecting may be expressed in a few words. We endeavour to teach our pupils the arts of *self-government* and *self-education*. So far from supposing education to cease at school or at college, we look forward to the moment when our

pupils become their own masters, as that in which the most important branch commences. If they leave us with a discriminating judgment, the power of doing and forbearing whatever religion and reason shall tell them ought to be done or forborne, and such an extensive and familiar acquaintance with elementary learning as shall render the business of acquisition pleasant, we consider our duty performed; and we look forward to their future character with much of hope mingled with our anxiety.

It has appeared to us, that to ensure the continuance of such conduct in the young man as the judicious teacher would induce in the boy, it is necessary to bring motives to bear upon him, which will not cease to act when he escapes from the trammels of a school. This great end, it is evident, can only be accomplished by forming an alliance with his mind. Let that be taken at an early age into partnership in the "art and mystery" of education, and before the time for entering the scenes of actual life shall arrive, it will be qualified to assume the entire direction of its possessor.

We have always endeavoured to recollect, that the ability for self-direction often exists without the power of self-obedience.

THE TANJ[...]

> "——Video meliora proboque
> Deteriora sequor——————"

is the bitter confession of many a man, whose judgment has outstripped his capability of enforcing her dictates.

> "Who reasons wisely is not therefore wise,
> His *art* in reasoning, not in acting, lies."

To us it is an object of deep anxiety to keep the habits in unison with the wishes. Few of the ills of life produce more pain than that state of discord which exists too constantly, we fear, between men's opinions and their actions. We mainly attribute this defect to the want of early practice in the inestimable science of self-direction.

Where much coercion is employed with young persons, they have no chance of acquiring this art. So far are their minds from governing their actions, that the former are in a continual state of rebellion against the motives which influence the latter. It ought not then to be a subject of wonder, that when those extraneous motives cease to operate, and the actions are left to the control of a power which they have never learnt the habit of obeying, anarchy should be the natural and inevitable consequence.

In conclusion, we wish to offer our testimony on one important fact. In proportion as we have found the means of always treating our pupils as reasonable beings, without endangering the subordination necessary in all government, in exactly the same ratio we have increased our own pleasure in the exercise of our profession.

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ERRATA.

Page 15, head, for *Division of the School*, read *Division of the School into Classes.*

34, lines 7 and 8, for "*Out of twelve absent from the first Class—*" read "*— out of twelve absent from the first Class.*"

47, line 11, insert *and* before *representing*.

66, 1, for *week* read *month*.

78, 16, insert *as* between *still* and *exercising*.

115, note, for *fertement* read *fortement*.

140, line 4, for *previosu* read *previous*.

149, last but one, for *progress in language* read *progress in a language*.

173, 11, insert *in* after *children*.

198 16, for *they* read *he*.

205, last but three, for *most* read *must*.

221, 3, insert *the* before *conviction*.

224, 16, for *enjoyed* read *obtained*.

232, note, for *twenty-three* read *twenty*.

235, line 4, after *may* insert *be*.

236, 6 from the bottom, for *O L* read *O S*.

note, the mistake in the text is copied, instead of being corrected;—read, therefore, *Y K* and *O Q*, instead of *O Q* and *Y K*.

PUBLIC EDUCATION.

CHAP. I.

OUTLINE OF THE SYSTEM.

It would hardly be reasonable to expect that all our readers will feel sufficiently interested in the minute regulations of a school, to read the long enumeration of them which we have thought necessary for giving that exact information, so requisite to those who have any intention of reducing a system to practice. For the general reader such an outline may suffice as will enable him to understand the chapters which follow the detail.

A schoolmaster, being a governor as well as a teacher, we must consider the boys both as a community and as a body of pupils.

The principle of our government is to leave, as much as possible, all power in the hands of the boys themselves: To this end we permit them to elect a Committee, which enacts the laws of the school, subject however to the

veto of the Head Master. We have also Courts of Justice for the trial of both civil and criminal causes, and a vigorous police for the preservation of order.

Our rewards consist of a few prizes, given at the end of each half year, to those whose exertions have obtained for them the highest rank in the school; and certain marks, which are gained from time to time by exertions of talent and industry. These marks are of two kinds: the most valuable, called premial marks, will purchase holiday; the others are received in liquidation of forfeits. Our punishments are fine and imprisonment. Impositions, public disgrace, and corporal pain, have been for some years discarded among us.

To obtain rank is an object of great ambition among the boys; with us it is entirely dependent on the state of their acquirements; and our arrangements according to excellence are so frequent, that no one is safe, without constant exertion, from losing his place.

The boys learn almost every branch of study in classes, that the Master may have time for copious explanations; it being an object of great anxiety with us, that the pupil should be led to reason upon all his operations.

Economy of time is a matter of importance with us: we look upon all restraint as an evil,

and, to young persons, a very serious evil; we are, therefore, constantly in search of means for ensuring the effective employment of every minute which is spent in the school-room, that the boys may have ample time for exercise in the open air. The middle state between work and play is extremely unfavourable to the habits of the pupil; we have succeeded, by great attention to order and regularity, in reducing it almost to nothing. We avoid much confusion by accustoming the boys to march, which they do with great precision, headed by a band of young performers from their own body.

CHAP. II.

SYSTEM IN DETAIL.

Government of the School.

THE government of the school is lodged in the hands of the Master, the Teachers, and a Committee of boys elected by their companious.

The Committee is chosen on the first Monday in each month, at a general meeting of the school, over which one of the boys is called upon to preside as chairman. The boy who is then highest in rank, the means of obtaining which are hereafter described, appoints a member of the Committee; the two next in elevation jointly nominate a second; the three next choose a third, and so on to the bottom of the list; the last section, if incomplete, being incorporated with the previous division.

The Committee at present consists of eleven boys; but its number must evidently vary with any considerable increase or diminution

in the school. Each of the assistant teachers is a member *ex officio;* but, as we think it desirable to leave the management of affairs as much as possible in the hands of the boys themselves, only one Teacher has been in the habit of attending the Committee's meetings.

The Committee meets once a week; it has the formation of all the laws and regulations of the school, excepting such as determine the hours of attendance, and the regular amount of exercises to be performed; but when the Committee has resolved upon any law, a copy is presented by the Secretary to the Head Master, whose sanction is necessary before it can be put in force.* The law is afterwards read aloud in the presence of the school, when its operation immediately commences, and a copy is hung in a conspicuous part of the school-room, for at least three days.

The regulations of the Committee require, that, previously to the discussion of any new law, a week's notice shall be given. This ne-

* The first Committee was appointed on the 3d of February, 1817; and although from that time to the present (October 1821), the Committees have been constantly employed in repealing, revising, and correcting the old laws, and in forming new ones, the master's assent has never, in a single instance, been withheld, or even delayed.

cessary arrangement having sometimes occasioned inconvenient delay, a Sub-Committee, consisting of the Judge and Magistrate for the time being, has been empowered to make regulations, liable as usual to the veto of the Master; which, unless annulled in the mean time by the General Committee, continue in operation for a fortnight. A great advantage of this arrangement is, that it affords opportunity of trying as an experiment the effect of any regulation, and modifying it, if necessary, before it forms a part of the code of written laws.

Immediately after its election, the new Committee assembles, and proceeds to appoint the officers for the ensuing month. A Chairman and Secretary are first chosen; then the Judge, the Magistrate, the Sheriff, and the Keeper of the Records, are elected. At the same time also, the Master appoints the Attorney-General, the Judge nominates the Clerk and the Crier of the Court, and the Magistrate his two Constables.

Of the duties of the Judge we shall speak hereafter. The Magistrate has the power of enforcing all penalties below a certain amount. When an offence is committed which is beyond his jurisdiction, he directs the Attorney-General to draw an indictment against the offending party, who takes his trial in a manner which

will be hereafter described. The Magistrate also decides petty cases of dispute between the boys; and is expected, with the assistance of his Constables, to detect all offences committed in the school. At the end of the month the boy who has officiated as Magistrate is rewarded with a half holiday, and, in order to secure to him the good-will and active co-operation of the other boys, he has the privilege of choosing a certain number of them to enjoy the holiday with him. This number is estimated by the Master, according to the success of the police in preserving order. The Magistrate has also the power to reward the Con stables with half a day's holiday at the same time, and to permit each of them to confer the same favour on either one or two other boys, according as he shall think his Constables have performed their duty.

The Sheriff has to enforce all penalties levied by the Court of Justice; and in case of the inability of the defaulter to pay the fine, it is his duty to imprison him. The rate at which penalties of marks shall be discharged by imprisonment has been determined by the Committee. The Sheriff has also some other duties, which will be mentioned hereafter.

The Keeper of the Records has the care of

the indictments and other papers belonging to the Court of Justice.

The Attorney-General is the officer who conducts the proceedings against those boys who are tried by order of the Magistrate. In cases of appeal, which will be hereafter explained, it is the duty of the Attorney-General to draw up the necessary documents, if required by the appellant; for this he receives a fee of a certain number of marks from the unsuccessful party.

The Court of Justice assembles on Wednesday afternoon, whenever there is business which requires its attention. At this time every teacher and every pupil is expected to be in attendance. All boys, except the officers of the Court, those who are in certain lower classes, and such as have been convicted by the Court within the last month, are competent to serve upon the Jury.

The Jury consists of six, who are chosen by lot from among the whole body of qualified boys. The lots are drawn in open Court, the first by the Judge, and the remaining five by the first juryman drawn. The Jury choose their own Foreman.

The Attorney-General and the accused party, if the case be penal, and each disputant, if civil, have a peremptory challenge of three,

and a challenge for cause, *ad infinitum.* The Judge decides upon the validity of objections.

The officers of the Court and the Jury having taken their seats, the defendant (when the case is penal) is called to the bar by the Crier of the Court, and is placed between the Constables. The Clerk of the Court then reads the indictment, at the close of which the defendant is asked if he object to any of the Jury, when he may make his challenges, as before stated. The same question is put to the Attorney-General. A short time is then allowed the defendant to plead guilty, if he be so disposed; he is asked no question, however, that he may not be induced to tell a falsehood: but in order to encourage an acknowledgment of the fault, when he pleads guilty a small deduction is made from the penalty appointed by the law for the offence. The consequence is, that at least five out of six of those who are justly accused acknowledge the offence in the first instance. If the defendant be determined to stand his trial, the Attorney-General opens the case, and the trial proceeds. The defendant may either plead his own cause, or employ a schoolfellow as counsel, which he sometimes does.

The Judge takes notes of the evidence, to assist him in delivering his charge to the Jury:

in determining the sentence he is guided by the regulations enacted by the Committee; which affix punishments varying with the magnitude of the offence and the age of the defendant, but invest the Judge with the power of increasing or diminishing the penalty, to the extent of one-fourth.

The penalties appointed by the Judge are entered in a book by the Sheriff, and a copy of the sentence is laid before the Master for his signature, when he can, if he please, exercise his power of mitigation or pardon.

The fines are paid into open court immediately after the ratification of the sentence; otherwise the defendant is imprisoned.

Any one who has committed an offence may, with the permission of a Teacher, escape the shame of a public trial, by undergoing the greatest possible punishment that he could suffer from the sentence of the Judge.

A register is kept of all who have been convicted before the Court of Justice, and of those who have paid the increased fines in order to escape trial. Some boys are acutely sensible of the disgrace of appearing in this book; and in order to make this very proper feeling a spur to moral improvement, it has been thought advisable to allow any one, whose name, at the last arrangement according

to good behaviour, (on a system to be explained hereafter,) shall have stood above a certain number, to move the Court to order the erasure of his name from the criminal register. The boy in this case is obliged to give notice of his intention to the Attorney-General, and, to succeed, he must prove to the satisfaction of a Jury, that his conduct for a long time past has been exemplary. This has been done in some instances.

The offences which come before the Court of Justice are, principally, leaving the school before the appointed exercises are completed and examined, going beyond the school boundaries, and falsehood. Petty acts of dishonesty have sometimes been the subjects of legal investigation; but these, we are happy to state, occur very rarely indeed. When a case of prevarication comes before the Court, the offender is likely to be severely dealt with, for the Juries have hitherto shown a decided aversion to every kind of deception; and a quibble is, perhaps, punished more rigorously than a direct falsehood.

Any one who shall think himself aggrieved by a decision of the Magistrate, a Teacher, or of the Court of Justice, may appeal to the Committee. Two instances only have occurred of appeals from the Court of Justice, both of

which were brought by the Attorney-General, against verdicts of acquittal; and upon each occasion the Committee reversed the decision of the inferior Court. Neither of these cases was of that clear and undoubted nature which would authorize a charge of partiality against the Jury; moreover, in each instance, evidence was brought before the Committee which had not been heard below. Appeals against the decisions of the Teachers and Magistrate have been frequently made. The Committees have generally ratified the former decisions; and when they have not, (with a few exceptions only,) they have acted in conformity with the opinions of the Teachers as a body. We can remember only two instances in which that has not been the case; even here all that was done was to reduce the penalties, not to remit them altogether; and though it was the opinion of the Teachers that in these instances the Committees were actuated in some measure by party feeling, we cannot be certain that such was the fact, because it is not impossible that the Teachers themselves might be influenced by a sentiment of *esprit de corps* in favour of the acts of an individual of their own body.

It has lately been the etiquette, when any case of appeal concerning a Teacher comes before the Committee, to leave the decision

entirely with the boys; the only Teacher who is in the habit of attending the meetings declining to vote on the question.

When any boy above the age of thirteen leaves the school, his character becomes the subject of judicial consideration; a report thereon is drawn up, and laid before the General Committee by a Sub-committee appointed for the purpose. In this report, the boy's merits and demerits are impartially stated; his improvement while at school, his rank and general character, and the offices of trust he may have served, are here recorded. On the other hand, the criminal register is consulted, and should his name be found therein, the fact is now brought forward against him. Offences committed long ago, however, are not unkindly dwelt upon; and moral improvement is always recorded with pleasure.

These reports are entered in a book, and read to the whole school. If any boy desire a copy of his character, he is furnished with one by the Secretary.

Division of the School into Classes.

The school consists of about seventy boys, who are arranged into classes for each department of study, according to their proficiency in that department. Thus, a boy, who stands in the highest class of Latinists, may be in the second of Arithmeticians, and so on.

The studies pursued in classes are orthography, geography, parsing, short-hand, the mathematics,(commencing with common arithmetic, and including mensuration, trigonometry, geometry, and algebra,) French, Latin, and Greek. All the boys are engaged in the greater number of these pursuits; but a few of the studies are followed by a part of the school only.

While receiving instruction in arithmetic, each class, under the care of a Teacher, is arranged before a large black board, on which the operation is chalked, in the same manner as it is usually written with a pencil on a slate, only that, with us, the calculations are performed aloud, the Teacher merely writing the figures as they are named by the members of the class; whereas, in using a slate, the operation is worked in silence, and by an indi-

vidual. A considerable portion of the time is employed by the Teacher and his class in entering into a complete investigation of the nature of the problem to be solved, and after an answer to the arithmetical question has been obtained, the probability of its accuracy is ascertained by a process, in almost all cases carried on without the use of figures, which is technically called—Calculation by round numbers. In giving to our pupils just and clear conceptions of the nature of the problem, and the various methods of solving it, we have found this exercise of the greatest utility.

Each class has a certain number of rules, through which it proceeds time after time, without ever leaving the path prescribed; but, at stated periods, the boys who show themselves best entitled to advancement are promoted to higher classes. Thus, a little boy who shall enter the school in the lowest class of arithmeticians, will, in process of time, work his way into the highest; it must depend, however, on his talent and attention, whether his ascent be rapid or otherwise.

Although in learning arithmetic the time of the boys is principally occupied in the manner now described, practice on the slate is not altogether excluded.

Besides what has been already mentioned,

the boys are daily exercised in mental arithmetic, for which a new arrangement into classes takes place, entirely independent of the pupil's progress in written arithmetic.

Here such questions only are proposed as can be calculated without the aid of signs; and the answers are either given orally, when the boy who is first able to solve the question speaks; or written upon slates, when each pupil is obliged to perform the calculation mentally, and to write a correct answer. The mechanism of the class is such as to induce every member to be as rapid, but at the same time as correct, as possible; and by means of little sticks, which are received by the boys for correct answers, but forfeited for mistakes, not only the rank of each boy is registered, but the number of correct, above that of incorrect, answers, which have been given by any individual of the class, may be ascertained in a moment. When this number equals a certain amount, the individual has permission to retire, and has at his own disposal the remainder of the time allotted to this exercise. This method of proceeding, a little varied according to the nature of the employment, is adopted by the classes in every department of study.

The lower classes engaged in mental arithmetic are exercised in calculating questions

respecting interest and discount, in determining whether a certain year is bissextile or not, and in miscellaneous questions respecting the value of articles of various numbers and prices.

The upper classes are employed in exercises more scientific: they learn to determine the age of the moon at any given time, the day of the week which corresponds with any day of any month and year, and Easter Sunday for a given year. They will square any number not exceeding a thousand, extract the square root of a number of not more than five figures, calculate the distance of places, (the time which sound takes to pass from one place to another being known,) determine the space through which a body falls in a given time, the circumferences and areas of circles from their diameters, and solve many other problems in mensuration; besides which, they have considerable practice in mental algebra, vulgar fractions, and in abstruse miscellaneous calculations.

In learning short-hand, the classes are principally occupied in reading it. Practice in writing it is, however, occasionally given, when care is taken that the characters are delineated with the utmost precision.

Rank.

All our arrangements tend to make rank in the school an object of great importance to the boys, and to confer it in proportion to moral and mental excellence.

The various arrangements of the school into classes for different departments of study determine, each for a time, the relative rank of every boy in the school. Thus, for one week the rank of each boy depends upon his progress in Greek, as far down the school as that language is taught. Those who do not learn Greek follow, according to their proficiency in some other study. Latin determines the order for another week, geometry for a third, and so forth.

Most of the studies determine the arrangement for a single week each, but a few which are very important decide it for two distinct weeks in each half year.

At a time appointed, the classes for that department of study which is to determine the rank for the following week are assembled, each under the care of a Teacher, and a new arrangement is made, according to the proficiency of the boys at that period, by a process

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as nearly mechanical, as, perhaps, the nature of the business will admit. Sometimes, however, the Teachers are obliged, from the circumstances of the case, to adopt a more arbitrary mode of proceeding. Thus, in arranging the boys according to propriety of manners and general good conduct, which is done twice in the course of each half year, they determine the rank of every boy to the best of their discretion. In doing this, however, they are materially assisted by the various records which are preserved of the good and bad conduct of the scholars.

A weekly register is made of the rank of each boy, and at the end of the half year the prizes are awarded, in the order of their value, to those boys whose aggregate rank is found to be the highest.

In order that every boy may know exactly the effect of any new arrangement of the school upon his aggregate rank, it is ascertained and published, and the boys are made to stand in the order of such rank on a certain day in each week. At the same time, by a comparison of the aggregate rank of each with his place on a list arranged according to seniority, the twelve boys whose rank in merit surpasses that in seniority in the greatest degree, are selected from the others, and rewarded

according to the amount of disparity. These rewards, of course, are generally claimed by little boys.

Here it may be noticed, that, contrary perhaps to what would be expected, the boys who excel in one pursuit are never very low in another. The number of boys who are in the highest class in every department of study is by no means inconsiderable. The same individuals who are found at the head of the Greek and Latin classes are also among the first in the mathematical, reading, and French classes; and what is more remarkable, in such exercises as penmanship and scale-drawing, arts in which, from the necessity of devoting their time to more important pursuits, they have scarcely any direct instruction, the boys of talent and information, actuated by the wish to maintain at all times a respectable rank in the school, find means to qualify themselves for competition with those who give much time to studies of this description, but who are little acquainted with the higher branches of education.

There are some exercises, which, although they do not affect the weekly arrangements of the school, yet influence the determination of the prizes. Of this description are translations from the Latin and Greek into English verse

and prose, and from English into Latin and Greek, original composition, reports of lectures, and mathematical demonstrations. Each of these in turn is the subject of a voluntary exercise, and the efforts of the candidates, according to their various merits, are recorded in their favour. At the vacation, that fourth of the whole number of boys who have either gained prizes or made the best approach towards obtaining them, are distinguished from the rest, by being furnished with a statement of the rank they respectively have held in the competitions of the several weeks, and in the voluntary competitions for advancing their claim to the prizes; the statement comprising the place the boy occupies in the order of age, that his friends may the better perceive the degree in which he has distinguished himself.

As we have before stated, it is an object with us to make rank as important in the eyes of the boys as possible. The weekly arrangement determines for a time the precedence of the boys. With a few exceptions, which will be stated shortly, they sit according to it at their meals: when presenting their exercises to a Teacher for examination, superiority in rank gives them a prior claim to his attention; and it has been seen, that the higher a boy ranks, the more influence he acquires in the

election of the Committee, and, consequently, the greater is his control in the affairs of the school. There are other motives which render this rank desirable, but it is not necessary to enumerate all.

A class of boys, called, *par eminence*, the Students, is formed of such as were distinguished by obtaining prizes at the last distribution of them, including the Judge and the Magistrate, whether otherwise entitled to be members or not. These boys invariably sit at the head of the table; the Judge ranking first, then the Magistrate, and afterwards the others, in the order of the prizes which they last gained. The Students enjoy many privileges; they are excused from serving certain laborious offices, as that of Monitor; they are not under the regular discipline for the preservation of silence to which the others are subjected. The other boys, at the commencement of business after each meal, are examined as to personal cleanliness; and once in each day their desks are also inspected, to ascertain if they are neatly arranged. From each of these examinations the Students are exempt, their rank being considered as a sufficient guarantee for their attention to those duties. This class has also a cricket-ground of its own, to which each member has the liberty of introducing a schoolfellow of a certain rank.

Rewards and Punishments.

Our rewards are chiefly conferred by the distribution of certain counters, which the boys obtain by superiority in the classes, by filling certain offices, and by various kinds of voluntary labour. In the forfeiture of these counters our punishments chiefly consist; hence the pieces are called penal marks.

Every boy in the school devotes such part of his play-hours as he may think proper to the obtaining of these marks. The product of almost any kind of labour or study is received, provided it is presented in a complete state, and is tolerably well executed. As each boy, for this purpose, is at liberty to employ himself in the way he shall think proper, he of course engages in those pursuits which are most consonant with his taste. Some boys give much time to translation, others prefer drawing and planning; with some, ornamental printing is the favourite amusement; models of machinery, of houses, of animals, &c. are frequently presented for rewards; and many boys devote their leisure time to reading, who, when they claim to be rewarded, undergo an

examination as to their knowledge of the book they have chosen, that it may be ascertained whether they have read with attention. Among the younger boys writing is much practised, and as this kind of labour is more easily measured, than, perhaps, any other, it furnishes the standard value of the counters. One penal mark is given for two lines of running hand, three of round hand or round text, or four of large hand. In apportioning to pieces of other work the proper reward, the Teacher considers to what quantity of writing each is equivalent, and gives the corresponding number of marks. This rule is, however, often relaxed, with a view to reward excellence and to encourage those kinds of exertion which are thought to be the most useful.

The penalties are entered at the time they are incurred in a book which is kept for the purpose; and at an appointed hour in each day the boys are expected to pay to certain Teachers, who are in readiness to receive them, all the penalties which may have been registered against them on the preceding day: those, however, of the younger boys are lessened by subtracting a sixth for every year which the age is under eleven. At the same time other Teachers are occupied in giving the rewards for voluntary labour. The names of those

boys who cannot pay their fines are entered on a list (called the defaulters' list), which is kept by the Sheriff, the penalties being doubled. Those who remain on this list are confined to the school-room, except at meal-times, and during one half hour in each day which is allowed for exercise: they are also obliged to rise an hour earlier than the other boys in the morning; and at the next holiday, should they be still upon this list, provided their names have not been entered within the preceding twenty-four hours, the Sheriff has the power of confining them separately in the dark, for a time proportionate to the amount of their debts. The Sheriff is at all times ready to strike a name from the list, upon payment of the marks owing. Thus it is always the interest of every boy to have a considerable stock of marks in his possession; and to encourage this by another motive, twenty per cent. is deducted from all penalties paid at the moment they are incurred. Prudent boys are careful never to be without some hundreds of these marks; and there are those who have thousands. Indeed it is an object of ambition to possess the greatest number. A remarkable instance of anxiety to obtain marks was given by a boy, who, for that purpose, in a very short time translated, into tolerably correct blank verse,

the whole four books of the Georgics, without any assistance from a translation.

The care of the public treasure, if we may so call it, (meaning the counters not in circulation,) is entrusted to a boy who is called the Banker; and his ac counts, whichare kept in the common form, show the number of marks received every day as penalties; and a comparison of the amount of checks drawn upon the banker by the teachers, with the total of marks received into the bank for any given time, will show whether in that period the school at large has become richer or poorer. The Banker is paid for his trouble by a commission of one per cent. on his receipts and issues.

Those who have not sufficient prudence to keep a stock of marks are generally put under the care of the elder boys, who contract, under certain penalties, to keep their names from the defaulters' list.

It is the business of these Masters to see that their pupils have a constant supply of marks, and to be careful that they avoid penalties as much as possible, by making them learn their lessons, and perform all their exercises at the proper times. These offices, like most others, are sold by auction; care, however,

is taken that the contractor is a person of responsibility.

The Masters have no power of coercion over their pupils, except that in an instance of refusal to work, a Master may, with the permission of a Teacher, imprison his pupil for a time not exceeding half an hour; but this confinement is not allowed in commutation of penalties, and is very seldom resorted to, as it is contrary to the interest of the Master that his pupil should suffer such a loss of time. In fact little boys, when under the care of those who are more experienced, are relieved from so much anxiety and embarrassment, that it is frequently their own request to be placed under the little restraint which is by this means exercised over them.

It appears to us desirable that every school should preserve records of all such transactions as affect its well-being (whenever they can be made without an undue sacrifice of time), to enable the conductors to ascertain whether the character of the school is progressive or otherwise. We have a register of this description, which exhibits, in a very small compass, a weekly account of many important particulars; such as the amount of rewards and fines, the total of penalties discharged by imprisonment, the number of hours of con-

finement, any injury done to the premises, the trials and convictions before the Court of Justice, &c.

By consulting this register, we find that for the last half year the weekly average of imprisonment for each boy has been less than a quarter of an hour; and that out of seventy-four, which is the number of boys in the school, forty-seven have never been confined at all.

Besides the counters already mentioned, rewards of another description are given, which we call premial marks: these can only be obtained by productions of the very best quality, and, unlike the penal marks, are strictly personal; that is, they cannot be transferred from one boy to another: with a certain number of them, a boy may purchase for himself an additional holiday, which can be obtained by no other means; and in the payment of penalties, they may be commuted at an established rate for penal marks. To prevent unnecessary interference in the arrangements of the school, the purchase of holiday with premial marks is confined to a certain afternoon in each week, when any one who is able may obtain his liberty. But an inducement to save their premial marks is offered to the boys by making them the means of procuring rank. Thus

once and sometimes twice in every half year, (according to the number of weeks from vacation to vacation), the first place is put up to auction, and given to the boy who is willing to sacrifice for it the greatest number of premial marks: the second place is then sold in the same manner, and so on. By these means the possession of premial marks is made to bear upon the determination of the prizes; and so powerful is the motive thus created, that we find, on an examination of the accounts, that a boy of fourteen, now in the school, although constantly in the possession of marks amply sufficient to obtain a holiday per week, has bought but three quarters of a day's relaxation during the whole of the last year. The same boy, at a late arrangement, purchased his place on the list by a sacrifice of marks, sufficient to have obtained for him twenty-six half days' exemption from the labour and confinement of the school.

The Monitor.

The office of Monitor is filled in the order of age, by the boys who reside at the school, commencing each half year with the eldest boy; certain individuals, however, the Students among others, are excused from serving. The number so privileged is generally about thirteen or fourteen; and as there are more than fifty boarders in the school, and the same individual keeps the office for a week, the duties of the Monitor, which are by no means trifling, never devolve upon little boys.

The Monitor has to ring the bell at the proper times, to keep certain accounts, and to transact other necessary business connected with the attendance of the boys on their various avocations. His duties occupy much of his time, in consideration of which he is relieved from some of the school exercises. As a great deal depends upon his punctuality, a system has been arranged, by which he is held to the strictest responsibility. A statement of the times at which the bell is to be rung, and of the other duties of the Monitor, is hung in the school-room, which is furnished with a clock; a fine is imposed upon any one who shall ring

the bell except the Monitor, so that this officer knows that he must depend upon himself alone; but if he, from any unavoidable circumstances, be unable to attend to his duty, he informs the boy who filled the office last, who then becomes the responsible person. If the Monitor should ring the bell or call over his list at the wrong time, he pays a considerable fine, which increases with every minute of error, whether he be too early or too late.

In the course of the week the Monitor has to ring the bell more than 250 times; if this be done without a single error, he receives twenty premial marks,—a reward which is occasionally obtained, though not very often.

Miscellaneous Arrangements.

Music has been introduced into the system with considerable advantage. The boys assemble in their various classes, and proceed to the places where they are taught, as well as march to their meals, always accompanied by music. We thus avoid much confusion and loss of time.

To induce boys to learn to play upon some instrument, generally the flute, and to enter

the band, a weekly stipend of penal marks is all that is required; the regular and frequent practice which is by this means obtained, (for the musicians perform more than twenty times per day) assisted by the occasional instruction of a master, ensures tolerable proficiency in the art.

We wish particularly to observe, that we have never found this employment to injure the health of the boys in the least degree. This we attribute to the shortness of the performances, which seldom occupy more than half a minute each.

At present the band consists of eleven performers.

The other boys, by their frequent practice in marching, learn to measure time with all the precision of soldiers, an acquisition that is not only useful in contributing to the order and celerity with which the various evolutions of the school are performed, but which has been in many instances of great assistance in enabling boys to subdue serious impediments of the speech. We believe that stammering results altogether from the habit of speaking without an attention to time.

When the school assembles in the morning, forenoon, afternoon, and evening, it is necessary to ascertain what boys are absent, in

order that inquiries may be made into the cause, and fines levied or remitted according to circumstances. Our mode of accomplishing this end was formerly that in general use, namely, by calling over a list of names; but, about two years ago, we formed a plan, which has not only the advantage of superior accuracy, but also of greater speed.

At these times the bell rings two minutes, during which the boys are expected to assemble in the school-room. When the bell ceases to ring, the door is closed, and for the present no one is admitted. The band immediately commences a tune, which is played once over. During this time the boys arrange themselves in a certain part of the school-room, in the classes in which they are about to receive instruction; as, for instance, in the morning, in the reading classes. A board hangs against the wall at the head of each class, exhibiting the names of the members; with figures expressing the number of boys in the class, after deducting those who are engaged in the band. While the tune is played, it is the business of the second boy in each class to ascertain by a comparison of the number present with that marked on the board whether or not any boys are absent, and if any, the

number of absentees. At the same time their names are found by the boy at the head of the class.

Immediately that the tune ceases, the second boy in the first class declares aloud the result of his examination; thus—"The first class twelve complete," or "Out of twelve, absent from the first class—" as the fact may be. If any are absent, the boy at the head of the class calls their names one at a time, while they are entered in a book by a boy who writes them in short-hand, and repeated aloud by another who stands near him. The second class now proceeds in the same manner, and is followed by the other classes, and lastly by the band.

The next operation is for the second boy in the lowest class to declare the number present in his division; as for instance, he may say, "Ten." The second boy in the next class adds to this the number present in his division; thus he may say, "and nine make nineteen." He is followed by the second boy in the class next higher, and so on through all the classes and the band. The accomptant, who in the mean time has numbered the absentees which he has entered, adds this number to the last expressed, at the same time declaring the total, which, if the operation has been correctly

performed, is equal to the whole number of boys, of which the school consists. If any error has arisen, it is readily detected by repeating the process.

We begin the latter part of the operation with the lowest class, for the obvious reason that the little boys may have easy numbers to add together. During this time the Teachers are not unoccupied. One of them keeps an account similar to that made by the short-hand writer, as a check upon his proceedings; another counts the number of boys present in each class, in order to ensure correctness in that part of the proceeding; and a third follows the casting.

When the total is declared to be correct, which is almost always the case in the first instance, the words "Face" and "March" are given, the band plays, and the classes proceed to their respective stations.

The whole of this operation, from the time the bell ceases to ring to that when the classes are in their places ready for work, generally occupies about four minutes.

The Registrar now enters in the general account of attendance, as present, the names of all who do not appear in the short-hand report of absentees. Those who were not present at the muster have the time of their

arrival marked immediately as they enter the school; and unless they can show very satisfactory cause for their absence, a fine of penal marks of a certain amount is levied upon each.

In order to preserve silence in the school when the boys are not occupied in classes, the following plan has been adopted. The boys are divided according to age, into several sections, each division occupying one part of the school-room. At the commencement of school-time, the lowest boy in each division has a staff placed in his hands, which he may transfer to any one who shall disturb the peace, be out of his proper place, &c. At the conclusion of school, the boy who then holds the staff has a certain penalty set against his name. When any disorder takes place in a division, the presiding Teacher orders the proper penalty to be entered against the staff-holder; who in that case has the same right as before to transfer it to him who caused the penalty to be entered; but he does not by that means relieve himself from the fine entered against him, which he has incurred for want of activity in passing the staff.

The penalties vary in magnitude according to the order of the division, the greatest being for that section which consists of the oldest

boys. The division according to seniority is made in order to bring into competition those of nearly equal age.

Besides the staff to each division, another is passed among those who may be from their desks. Its use is to prevent any irregularity among those whose occupations may lead them from their divisions.

An arrangement, very similar to that now described, is adopted when the boys are taking their meals.

Latin and Greek.

It is scarcely necessary to state, that in these divisions of study we have, in common with other schools, our daily lessons. In preparing these, the inferior pupils are allowed the assistance of translations, which they of course lay aside when they come to say their task. The superior scholars have only the occasional aid of their Teacher; but all are expected to acquire so perfect a knowledge of the passage to be translated, as to be able to construe it without the slightest error. If the pupil perform the lesson correctly, he receives a stated reward, regulated by the

rank of the class to which he belongs; if, on the contrary, a single mistake be made, the pupil has to pay a heavy fine. The repetition of these lessons commences at seven o'clock in the morning, and is generally concluded in forty minutes. As not more than two Teachers are engaged, this time would be wholly insufficient for the accomplishment of the business allotted to it, were not the pupils so completely in possession of their tasks as to proceed without hesitation. On each Monday morning the same time is employed by pupils of some proficiency in repeating sections of the grammar. In allotting to the classes their several portions of labour, the point aimed at is, that the quantity should be such as to require the private study of each pupil for an hour and a half. Deductions are, however, sometimes made on account of extreme youth, ill state of health, &c.

Besides the performance of these prepared lessons, a considerable portion of the day is devoted by the superior classes to extemporaneous, and by the inferior ones to analytical, construing.

For analytical construing the pupils are furnished each with a dictionary, grammar, and a copy of Dr. Valpy's Delectus.

The business commences by one of the

pupils reading the sentence to be construed, (if more than one pupil offer to read the sentence or to perform any other part of the exercise, the preference is given to that candidate who stands lowest in the class;) the personal verb of the sentence is next ascertained; if there be more than one they are all named; the theme and signification are then discovered by means of the grammar and dictionary. This operation is repeated upon the other words of the sentence, according to the order in which they occur in the original; immediately after a preposition, however, is taken the word which it governs: the pupils then attempt to repeat the signification of the words without recurring to the grammar and dictionary. If this attempt fail, recourse having been made as occasion may require, it is repeated until successful; the sentence is next construed, and if in performing this the class require any assistance from the Master, the operation is repeated until his aid is no longer necessary. Perhaps this exercise may be best illustrated by example; we will suppose the class to commence with the sentence, "*Jacent sub arbore poma.*" The passage having been read, a pupil names "*Jacent*" as the verb; after which the boys, each speaking as often as he is able, but always waiting for the Mas-

ter's approbation or disapprobation of that which was last said, thus proceed :—" *Jacent* like *monent—Monent* from *moneo—Jacent* from *jaceo—Jaceo, to lie—Monent, they advise—Jacent, they lie—Sub, under—Sub* is a preposition."—" Examine what case it governs."—" It governs the accusative or ablative."—" Find an accusative or ablative."—" *Arbore* is an ablative—*Arbore* like *parente—Parente* from *parentis*—Arbore* from *arboris*."—" Consult the dictionary."—" *Arboris* from *arbos—Arbos, a tree—Sub arbore, under a tree—Poma* like *regna—Regna* from *regnum—Poma* from *pomum—Pomum, an apple—Regna, kingdoms—Poma, apples*." The class now repeats—" *Jacent, they lie—Sub arbore, under the tree—Poma, apples*." Having accomplished this without any assistance, it proceeds to construe, " *Poma, the apples—Jacent, lie—Sub arbore, under the tree*."

It is obvious that, in performing this exercise, *Jacent* might have been compared to *regent* or *ament—Arbore* to *facie, felice*, &c.—

* As no grammar contains models for the numerous modes in which nouns of the third declension form their genitives, it is obviously expedient, that the young student should trace the inflexions of such nouns to their genitives, before he attempt to discover their themes: in the same manner, it is proper to trace certain inflexions of verbs first to the preterite.

Poma to *musa*, *opera*, &c. This would have occasioned some variation in the method of proceeding. Thus, if a pupil had compared *Jacent* to *ament*, the class would have thus continued :—" *Ament* from *amo*—*Jacent* from *jaco*."—" No such word in the dictionary."—Therefore *Jacent* is not like *ament*.

Upon leaving the inferior class, of which we have been speaking, the pupil is employed in extemporaneous construing, being no longer allowed the use of his grammar and dictionary. Amongst his present associates, he finds his new exercise carried on with considerable rapidity, as it is less frequently requisite to trace an inflexion to its theme, and as this operation, if ever necessary, is generally performed with swiftness and certainty by a mental process. Still, however, the words of every sentence are translated in the Latin order, previous to being construed, and the Teacher is occasionally called upon to stand in the place of a dictionary; though he avoids this as much as possible, by leading his pupils to remark the etymological similarity between the word they are engaged upon and other words with which they are already acquainted, thus guiding them eventually to the object of their search.

In the highest classes the pupils proceed at

once to regular construing, rendering their author sometimes by single words, sometimes by phrases, and occasionally by sentences; it is, however, their first business at each lesson to read in English the matter which has been construed on the previous day.

All these exercises are interspersed with numerous questions by the Teacher, upon the mythological and historical events mentioned or alluded to, as well as upon the grammatical construction, and the idiomatic formation and arrangement of such passages as claim particular attention.

Scanning is taught by a process which bears considerable resemblance to that which we have been describing. Each member of the class being furnished with a copy of the passage to be scanned, some one commences by attempting to scan a single verse; should he fail, such questions are put to the class by the Teacher, as may best serve to point out wherein consists the error which has been committed, and the members of the class are requested to repeat the rules which have been violated; if no one offers to do this, the pupils are directed to consult their grammars, and he who first succeeds in discovering the rules reads them aloud. After this, some one again attempts to scan the verse which is before the class; if he

fail, the process before described is repeated, and thus the class proceeds until the verse has been scanned without a mistake.

Our method of teaching parsing it is not necessary to describe, as we believe it differs in no important point from that in general use, except in the adoption of our own usual mechanism for classes as before described.

We teach the writing of Latin by the process of double translations, as practised by Roger Ascham in the education of Queen Elizabeth.

Under the head Exhibitions, our readers will find an account of the method pursued by our pupils in committing to memory selections from the different authors, where it will be observed, that we pay considerable attention to this important part of classical education.

French.

The boys who learn French are the members of the four upper parsing classes.

Our method of teaching the French language necessarily differs in many respects from that in which Latin and Greek are taught, although the principles acted upon

are the same. The acquisition of a correct pronunciation is the most difficult part of the study of the French language; and great care is necessary on the part of the Teacher to prevent the pupil from gaining any habit which must afterwards be broken. He is, therefore, never induced to pronounce French, except when pronunciation is the sole object of the lesson, until his habits are matured. This being the case, a grammar and dictionary cannot be used by him, as they are in the Latin classes, until he has made considerable advances; the Teacher, therefore, for a while supplies the place of both.

The time is very much employed in extemporaneous construing. Each boy being furnished with a copy of his author, the lesson commences by the Teacher reading in French the sentence which is to be translated, then the first word of that sentence, to which one of the pupils answers by giving the word corresponding to it in English. The next word is then read and translated, and so on to the end of the sentence. If, however, any word has occurred unknown to the whole class, and the Teacher has in consequence assisted in the translation, the sentence is construed again, and this process is repeated until the class has translated without assistance every word,

which being accomplished, the Teacher next reads the whole sentence in French, and is answered by a complete version of it in English. If the sentence should be so long that no boy can translate the whole of it at once, it is divided into phrases, which, after having been translated separately, are quickly combined so as to form the complete sentence. In this manner the lesson is continued, every sentence being rendered without error before another is taken. The higher classes, instead of construing word by word, begin with phrases and continue to the end of a paragraph, when they return to the beginning of the passage, in order to read it in sentences, unless assistance has been given them by their Teacher. In this case they always re-translate the sentence in which the aid has been received, until help is no longer necessary.

For the pronunciation and idiom we principally depend on the knowledge that is gained from learning French dramas;—a full description of the mode in which these are taught may be found in the section on Exhibitions. This instruction is received from one of our Teachers whose native language is French. Many boys are induced, by a weekly stipend of marks, to engage to speak in French every time they have occasion to address this Teacher, who is

always careful, if the pronunciation of what is said to him should be incorrect, to have it repeated until it be perfect. A forfeit is paid for every violation of the contract. We do not in any way encourage our pupils to make use of the French language in common conversation with each other, knowing that without superintendence it would be idle to expect that careful attention so necessary to prevent them from falling into bad habits, both with respect to pronunciation and idiom.

We have often been astonished that any teachers should expect favourable results from a plan so vicious. They seem to suppose, that if the pupil does not speak English, he must, of necessity, "*talk*" French. The truth is, he speaks neither language, but a miserable jargon compounded of both—the words French, the idiom and pronunciation English. Like the youth in the Dunciad, he

"Spoils his own language, and acquires no more."

For the purpose of attaining the niceties of the French tongue, some of the boys are attended by a French gentleman, who takes them through the usual course of grammatical instruction.

MAHARAJA ... TAKORE

Exhibitions.

In Chapter IV. we have given at some length our reasons for engaging our pupils very frequently in committing to memory large portions of the best authors in the languages which they are studying. It will be seen also, that we prefer compositions in the dramatic form, although we by no means confine ourselves within so limited a range, especially in Latin and Greek.

One evening in each month is given to reciting passages from the orators and poets, representing dramatic pieces and dialogues. This performance is called the Monthly Exhibition.

On the succeeding morning, every boy is informed what part he is to take the next time, and a day is appointed by which it must be committed to memory. The first step is to ascertain that the pupil is in full possession of his author's meaning. This once done, he is expected at any moment during his numerous rehearsals to give the exact translation of whatever passage his Teacher may call for; every default being the subject of a fine.

Having thus taken care that the pupil shall understand that which he is about to

learn, we practise him before he commits it to memory, in reading his part until he is perfect, not only in the pronunciation and quantities of words, but also until he can *read it well*, in every acceptation of the phrase.

Upon the day appointed, every boy repeats his part from memory; and if he have volunteered to learn it in the hours allowed for recreation (which is usually done by almost the whole number), he is rewarded according to his merit, regard being had to the length of his task as well as his success in accomplishing it. At the next repetition, as the pupil is expected to be quite perfect, a fine is exacted for every mistake. The words being now firmly fixed in his memory, he rehearses with spirit, and his mind is sufficiently at liberty to attend to lessons in gesture.

As the house which we occupy was built long since we began to act on our present system, we have every convenience for theatrical representation. By the arrangement of the rooms we can construct a theatre of ample size for all our purposes. One of the Teachers, assisted by some of the boys, paints the scenes for us. We have dresses too, and our *property-man* has not quite a sinecure. Our orchestra, which is filled by the school band, is by no means deficient in strength, whatever

defects the fastidious may discover in its harmony. The performance of the Exhibitions is varied by the occasional introduction of English pieces: a share in these is an object of no small ambition, and is generally given as a reward for assiduity in more difficult exercises. It may be observed that we have no want of candidates for the long parts when even the whole of a play is performed (as in the Latin language it sometimes is) notwithstanding the severe exertion necessary to commit them to memory in the very perfect manner which we require.

Once a year the friends of the pupils are invited. At that time the exercises principally consist of selections from the monthly exhibitions; and thus an additional motive is given to excellence in the discharge of the regular duties of the School. A part of the evening is taken up in examining the boys on their scientific acquirements, particularly on their knowledge of the Mathematics. Sometimes a class presents itself, prepared to demonstrate any proposition in Euclid's Elements within a certain scope. Sometimes trigonometrical operations are performed, and then verified by admeasurement. Boys are exercised in mental arithmetic, their friends being invited to propose questions.

We have heard it objected to our Exhibitions that they must necessarily give a taste for the stage. We certainly have found no such ill effects from them, nor, after considering the subject attentively, do we ever expect any change in our experience.

In the first place, distinction, according to our plan, is the price of severe labour, and of course can only be gained by industrious boys; but industry, where so much is left to the voluntary exertion of the pupil, must be the result of well-ordered habits and considerable self-command. Are these likely to lead a youth of fair prospects in life upon the stage? Again, no one in his senses will embark in a profession where the prizes are so few and the blanks so many, unless he firmly believes himself capable of rivalling the very small number whose lot even *seems* enviable. But this expectation, it will be replied, every stage-struck blockhead has in its highest pitch. True; but would he have been so mistaken in his calculations of probabilities, if his taste had been sufficiently cultivated, to enable him to form a just appreciation of the excellence which he thinks it so easy to equal or even to surpass? Without study and reflection, he is quite ignorant of what that excellence is: not only cannot he feel its degree, but he knows

nothing about the matter. He is guided in his opinions by fashion, and has no fixed principles of judgment by which he can try those merits which he fondly hopes to excel. The consequence is, that he never sees the infinite distance between himself and his models. It is a very common mistake with the ignorant to suppose that powers which they see exercised with facility have been acquired with ease. We believe the story to be true, that a man being asked if he could play on the violin, answered, "he could not tell, for he had never tried." A few lessons on the gamut would have wonderfully cleared his ideas of music. We therefore hope that the knowledge our pupils gain of the difficulties and the labour of the theatrical profession, compared with either its reputation in life, or its emoluments, will be a safeguard against all its allurements.

The Proceedings of a Day.

In order to give a more minute insight into the arrangements of the School, we shall relate, at some length, the proceedings of a day. It is unimportant which day we take, as, with

a very few modifications, the proceedings of of every day are alike.

Monday.—At five in the morning, if any boys are on the defaulters' list, they are called by the Monitor. The Teachers, who have in rotation the superintendence of the boys employed thus early, keep them fully occupied in working for penal marks till prayer-time.

At six o'clock the bell rings for the boys in general to rise. The Monitor goes into each dormitory, and blows a horn to awake such as may be sleeping. All the boys leave their beds at the word of command; and, when dressed, arrange themselves in each room in a certain order for marching down stairs.

Here it may be well to observe, that in each dormitory there is either a Teacher, or elder boy who is called the Prefect, with other officers under him, each having the care of a division. The boys who serve the offices of Prefect, and Sub-prefect, have salaries of penal marks, and are considered as responsible for the behaviour of those who are under their care. If any improper conduct should take place in either of the dormitories, it is the duty of the Sub-prefect of the division in which the irregularity may have arisen, to report it to the Prefect of the room, who at the next muster of the School makes it known to the Magistrate.

If this is not done, the officers themselves are fined.

At 6^h. 10^m. the bell again rings,* when it is expected that the boys in each room shall stand prepared to march down stairs. If this is not the case, the last in each dormitory who takes his place, incurs a certain fine, and the name is entered in a book by the Monitor. If all the boys in either of the dormitories are in their places, the Monitor obtains the signature of the Prefect. During the course of the day many cases regulated in this manner occur, the Monitor either entering the penalty to the defaulter, or if there be none, obtaining the signature of the person who happens to preside.

The Monitor's accounts are kept in a tabular form, so that it can be seen at a glance whether the penalties are entered or not, as every square of the table must contain either the name of the boy who has incurred the penalty, or the signature of the Teacher or Prefect then presiding. These penalties are daily posted into the general account, and at

* In December and January the boys rise at seven, and in November and February at half-past six. The other morning bells are, during these months, rung later accordingly.

the end of the week the whole of the Monitor's accounts are examined by one of the superior Teachers.

The boys being arranged, each division under the care of a Sub-prefect, and all in the same dormitory, under the command of their Prefect, the word "march" is given, and the different companies follow each other down stairs in regular order, accompanied by music. When they have reached a certain room on the ground-floor, the tune being completed, they are ordered to "break."

At 6^h. 16^m. the Monitor desires the drummer to beat a rally to call together the band, and

At 6^h. 17^m. the bell rings for prayers. Whenever the band is to assemble, this notice of a minute is given in the manner just described; it will therefore be unnecessary to mention it again. A psalm tune is now played, and in the meantime the boys arrange themselves according to the classes for mental arithmetic. When the business of the muster has been gone through, in the manner already described,* prayers are read. A slice of bread is then given to each boy; a march is played, and the classes proceed to their different places, where they are instructed in mental arithmetic,

* Page 33.

an exercise which is practised early in the morning, because it does not require much light. In these classes the day-boys are not included, another part of the day being devoted to their instruction in this branch of study.

At seven o'clock, the bell having rung two minutes for School, the day-boys are expected to join the boarders.

The boys assemble in the reading classes; a tune is played; the business of the muster is gone through; and the classes march to their places as already described. These classes read till twenty minutes past seven.

Until breakfast time the study of Latin and Greek is the principal occupation. The boys who learn Latin are divided into classes, each of which goes through its lesson before one or other of the classical teachers in the course of the morning. Besides which, they perform other exercises in the learned languages which have been already detailed.

A bell at 7^{h}. 20^{m}.—Those boys who are not sufficiently advanced to learn Latin, form into classes, for the repetition of lessons in English grammar and geography, which must have been previously committed to memory out of school hours. After this they practise penmanship. It is necessary to remark, that there are a few little boys upon whom some of the

arrangements do not operate. When they are able to join in the exercises of the other boys, they do so; as, when the classes are assembled for reading arithmetic, &c. At other times they are under the care of a Teacher, who gives them additional instruction in the earlier branches of education.

At 7^h. 50^m., a bell for the second Greek class, which is exercised in extemporaneous construing.

At 8 o'clock, a bell for a Latin class to practise analytical construing, which is exercised about forty minutes.

At the same hour, but on Monday only, the School Committee assembles. After the business of this meeting is despatched, on the alternate Mondays the Committee of the Gymnastic Society meets. This body has the management of a fund raised among the boys, by regular voluntary contributions, for the purchase of such articles of amusement as are too expensive to be bought by an individual. The subscribers meet on the first Monday in the alternate months, to hear the report of the Committee, pass the necessary resolutions, and to elect a new committee.

At 8^h. 20^m., a bell for the third class, which studies Greek, to assemble. This class has also an exercise in extemporaneous constru-

ing. At the same time those who are not engaged in Latin or Greek, form some into classes for the study of short-hand, and others into reading classes.

At 8^h. 45^m., a bell for washing. The day-boys now go to breakfast. The boarders, who are divided, according to their rank for the week, into four sections, assemble in the school-room. The first section immediately marches to the wash-house; the others, at the same time, begin to repeat the multiplication table, all speaking in unison. When the first division is washed, it is succeeded by the second; the two last still repeating the tables. The second is followed by the third section, and so on. Here, as in all other instances, rank is valuable: the highest section is exempted altogether from the drudgery to which their juniors are necessarily submitted; with these, however, the time decreases in proportion to their standing. As the members of each division are washed, they proceed into another room for the purpose of brushing their clothes; after which they are individually examined as to personal neatness and cleanliness.

At 9^h. 5^m., a bell for breakfast. The bell is rung for each meal mechanically at the appointed time; the cook is therefore aware that she must be ready to a moment, or keep all

the boys waiting at the table. This has been found sufficient to ensure uniform punctuality. A tune is played while the boys assemble, and as they march into the breakfast room.

At $9^{h}. 25^{m}$. a bell rings for the re-admission of such as choose it into the school-room; the doors of which, during breakfast, are closed, in order that it may be swept.

At $9^{h}. 45^{m}$. a bell for school. The muster is now, according to the arithmetical classes, in the manner already described. Two classes now receive instruction in speculative geometry, under the care of separate instructors; two other classes are exercised in the extemporaneous construing of Latin, while a number are engaged in entering in their ciphering books certain arithmetical operations worked on a previous day.

When any boy has performed the appointed task, his work is examined; and, if it is correctly and neatly written, he has permission to go upon the play-ground, and a check is placed opposite to his name in an account kept by the Registrar of the day. When the writing is not approved of, the boy is sent back to do the same work again and again, until it is passed. Those who, at the conclusion of the time allowed, have not completed the task, are expected to do so in their play-hours.

They are called up on the succeeding day, and a small fine is imposed on each for being in arrears; but if any one should not have completed the exercise by this time (which, however, is very seldom the case,) he pays a heavy fine, and is released from further restraint respecting it.

From 10^h. 40^m. to 12^h. 20^m. the time is principally devoted to arithmetic. Three Teachers are engaged in exercising the classes with the chalking-boards, in the manner described in a previous part of this detail.* Each Teacher undertakes two classes, one after the other, the intervals being divided equally between them. The two highest classes are taught by one Teacher, the two next by another, and the two lowest by the third. Of these last classes, that which is not engaged in the exercises on the board, performs arithmetical operations on the slates, under the direction of a fourth Teacher. From the classes which remain a number of boys are drawn off, to practise the extemporaneous construing of Greek or Latin, while others are engaged in scale-drawing. This arrangement is made in such a manner, that no one exercise shall be constantly interfered with, except as far as respects a few boys

* Page 14.

who are never employed in mere penmanship, as they have sufficient practice in writing their various exercises.

Those boys who are not occupied in any other way are exercised in penmanship, under the care of the Writing-master. The whole of the proceeding is as follows :—

At 10^h. 40^m. a bell for mustering in the arithmetical classes.—The 1st, 3d, and 5th march to their respective stations, to be exercised on the board, the 6th to practice on the slates, and the others dispose of themselves in the manner already described. It is to be observed, that, on all occasions, the classes assemble and march to their places to music.

At 11^h. 30^m. a bell for mustering again in the arithmetical classes. The 2d, 4th, and 6th, now go to the boards, the 5th take the slates, and the others learn Latin, writing, or scale-drawing, according to the regulations before-mentioned.

Some of the operations on the boards are preserved to be entered in the ciphering-books on the following day; the others are wiped off.

At 12^h. 20^m. a bell for the French classes to assemble.—They are exercised in the manner already described.* Two classes of lower

* Page 43.

boys, however, who do not learn French, read English.

At 12^h. 50^m. a bell for the penal marks to be paid. The mode of transacting this business is described under the head Rewards and Punishments. *

At one o'clock the dinner-bell rings.

At 1^h. 35^m. a bell rings, when the boarders assemble, each with his stock of shoes in his hands; they muster, and then march into another room in divisions, as at washing-time. Their shoes are now examined, and such as want repair are put by for that purpose. This is done only on Monday.

At 2^h. 15^m. the bell rings for school. The boys now muster for the purpose of reading. The absentees are ascertained by the means already mentioned; after which, with the exception of a few boys, who are sometimes drawn off to rehearse the Latin and Greek plays, the 1st, 3d, and 5th classes march to their respective Teachers to read; the 2d and 4th classes perform dictation exercises, and the 6th class is practised in spelling aloud.

At 2^h. 40^m. a bell for the classes to change. —While the 1st air is played, those boys who have been reading, prepare themselves with

* Page 23.

writing materials for dictation exercises; the others put up their books or slates, and prepare to read. When the order to "march" is given, the three classes which have just read change places, each with the class next below. Consequently the 2d, 4th, and 6th classes now read; the 1st and 3d perform dictation exercises, and the 5th class is exercised in spelling aloud.

At 3 o'clock the bell rings, when the exercises are as follows:—As the 5th and 6th classes of arithmeticians do not write in the forenoon, they practise penmanship at this time. A class is exercised in the extemporaneous construing of Greek, and another in surveying. The remaining boys assemble according to an arrangement for each particular purpose, to be exercised in short-hand or geography in alternate weeks.

At $3^h. 45^m.$ a bell for the French classes to be exercised as in the forenoon.

At $4^h. 10^m.$ a bell for the classes at mental arithmetic.—These classes differ from those exercised in the morning, as they include the day-scholars. In the alternate weeks the parsing classes are practised at this time.

On the Wednesday afternoons, if there are any causes to try, the Assizes are held at this hour.

At 4^h. 30^m. a bell for gymnastics.—The boys now muster with their hats on, the band falls in with them, and they all march to the playground, where they practise different gymnastic exercises. In the summer months, attended by some of the Teachers, they go to a bath, which has been made for them in a retired spot, at a short distance from the playground. Here instruction is given them in the art of swimming. If the weather be unfit for these exercises, the reading classes assemble at this time.

At 5 o'clock a bell to call the boys to tea.

At 6 o'clock the bell rings for evening school. The boarders only are expected now to attend. The muster is conducted in the same way as at prayers in the morning. Two classes are engaged in Latin, one in extemporaneous, the other in analytical construing; another in dictation exercises; and a fourth in performing arithmetical operations on the slate. From these classes boys are occasionally drawn to rehearse the French dramas.

On one evening in the week a lecture is given on some subject of natural or experimental philosophy, or on history; when certain upper boys take notes, from which they afterwards write reports. These notes are frequently taken in short-hand.

At 7 o'clock the school breaks up, and a bell rings for washing, which is conducted much in the same way as in the morning. A bell rings for each division.

During the remainder of the evening, except when at supper and prayers, the majority of the boys are engaged with the classical master in learning their lessons for the next morning. At this time those who are on the defaulters' list (a number seldom exceeding one or two), are obliged to be in the School-room; attendance on the part of the others is altogether voluntary: notwithstanding which, it is so regular, that an instance of omission scarcely ever occurs. The motives for attendance at this time are, that the boys have opportunities of obtaining assistance from the Teacher when any difficulty arises; and by repeating their lessons to him, they can ascertain whether or not they are in complete possession of the right construction of the passages which it is their business to translate.

At 7^h. 30^m. a bell for supper.

At 7^h. 55^m. a bell for prayers; the muster as in the morning.

At 8^h. 5^m. a bell for the younger boys to go to bed. They are accompanied by the band, and attended by a servant.

At 8^h. 40^m. a bell to give notice to the other

boys to go to bed. They now exchange their shoes for slippers, and arrange themselves in the same order as that in which they marched down in the morning.

At 8^h. 50^m. a bell rings, when the boys proceed up stairs, under the direction of a Teacher, and accompanied by music.

At 9 o'clock a bell rings, when, if the boys are not all in bed, the last in each room incurs a fine.*

A part of the boys are occasionally obliged to forego their other studies, to receive the lessons of those masters who do not reside in the house. A French gentleman attends one afternoon in each week, to give further instruction in the French language. The Drawing, Dancing, and Music Masters, also attend once in every week; but additional instruction is given in drawing and music, as well as in French, by resident Teachers.

* Lest it should be thought, from the foregoing journal, that the tasks of our pupils are heavier than can be safely borne by young people, we think it right to remind the reader, that when we speak of a class being occupied for a certain space of time, it is by no means to be understood as a general rule that every boy in the class is in attendance throughout. In those exercises also which are not performed in classes, there is the same opportunity for the pupil, by activity and attention, to relieve himself from the confinement of the School-room. In point of fact, no boys can be in better health and spirits, nor appear to be in higher enjoyment of life.

Once in each week all the boys in the School, except a few of the youngest, write public letters to their friends. The subject has generally been an epitome of the reign of some one of the English monarchs. Many of these letters are written in Latin, others in French. The boys are of course at liberty to write privately as often as they please.

The three days previous to the performance of the Latin and French plays, which takes place once a month,* are devoted principally to drawing maps and to printing. These exercises are chosen at this time, that the boys may be drawn off, without inconvenience, to rehearse their different parts.

Thursday afternoon, at which time the day scholars have holiday, is also very much devoted to these rehearsals. Lessons in speculative geometry are likewise given at this time. The boys not otherwise engaged are practised in writing.

On Saturday forenoon one of the superior Teachers examines all the work done in the week; that is, all that can be exhibited, as writing, drawing, &c. To each boy's work he attaches marks of approbation or disapprobation, and the individual is rewarded or fined

* Page 47.

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accordingly. The subsequent exercises of those who are fined are subjected to examination in the middle of the next week.

On Saturday afternoon the whole School has holiday.

On Sunday, in the intervals of public worship, the boys read the Scriptures; one class taking the Greek, one the Latin, another the French, and the remainder the English Testaments.

In the summer months, a class is frequently exercised in surveying. Rather an extensive trigonometrical survey, composed of triangles, some of whose sides are more than fourteen miles in length, extending into several counties, has been completed by this class, under the direction of one of the Teachers. The Mathematician will sympathise with us when we state, that in the course of the survey, having an opportunity of comparing our own operations with those of Colonel Mudge, we found the agreement such as to authorise a favourable opinion of their accuracy. In the third volume of the "Report of the Trigonometrical Survey of England and Wales" are given the distances of W——n and W——y spires, from a station at B———n; unfortunately nothing has been left to mark the exact place of this station; but the Colonel informs us that it is

"30 yards north of the plantation." We interpreted this description in its most exact meaning; that is to say, that the station was directly north of the *centre* of the plantation, and 30 yards from the nearest part of the clump of trees. Assuming this to be the exact point of the station, the boys calculated, by a series of triangles deduced from a measured base, that the distance of W——n spire from the station at B——n, was 48,352 feet, exceeding that given by Colonel Mudge by only seven feet in upwards of nine miles. The distance of W——y spire from the same station, they found to be 25,144 feet, exceeding that which is given in the "Report of the Trigonometrical Survey" by only four feet in almost five miles. Even these differences, trifling as they are, may be accounted for, when we consider the very vague manner in which the site of the station is described.

The original base line, which is not more than a third of a mile in length, the boys measured by means of long deal rods, which were rested upon stools, made to rise and fall so as to keep the same line throughout each hypothenuse. The mode of surveying it was not very different from that practised with such accuracy by General Roy on Hounslow Heath. As the base was measured in one of the

streets of a neighbouring town, it was necessary to do it early in the morning, that the boys might not be hindered by spectators. The survey occupied three mornings, from three till seven o'clock. The experienced Mathematician may smile at our choosing a street for this operation, but it was advantageously situated with respect to some of the public buildings of the town; beyond the limits of which we had at that time no intention of extending our survey.

CHAP. III.

REVIEW OF THE SYSTEM.

No topic of complaint is more common among professional men, than that of ignorant interference. The physician inveighs against quacks; the attorney ironically thanks the author of "Every Man his own Lawyer," for the increase of litigation; and the public teacher, when pestered with hints and objections, sighs at the recollection of the implicit confidence with which parents of the last generation entrusted their offspring to the experience of his predecessors.

But professional men should not forget that some of the most eminent of their number were intruders;—that John Hunter did not sit down to study anatomy, until he had passed many years at the carpenter's bench;—that Erskine had served both in the army and the navy, before he became a lawyer;—and that Joseph Lancaster, who has so much improved the machinery of elementary education, long

exercised the trade of a basket-maker.* Neither should it be forgotten by the public, that the instances of success have been published; not so those of failure: they would naturally excite but little attention, and would soon be forgotten, even by the few who had known of their existence. We have spoken too only of men, who, having changed the object of their pursuit, applied themselves to their new profession with intense and exclusive ardour, and brought to the task talents of commanding excellence; so that their success furnishes but little ground of argument for the justification of others, who, without such talent, and devotedness, think themselves qualified to decide "in last resort" on questions, which have experienced for years the painful attention of men exclusively engaged in their examination.

Still the professional man, though not bound to follow implicitly the suggestions of his friends, ought by no means to turn a deaf ear

* Had we time for such a purpose, it would be easy to collect materials for carrying the parallel through almost every art and science. At the present moment, we only call to mind the names of Swartz, the inventor of gunpowder, who was a monk; of Arkwright, the improver of cotton machinery, a hair-dresser; of Baskerville, the celebrated printer, who had been a japanner; and of Brindley, the great engineer, who had been a day-labourer.

to them; for a valuable hint may be thrown out by one who would in vain attempt to form a system. Long familiarity will ever tend to render us insensible to many imperfections, which are at once detected by the unpractised; and the bystander's want of skill is often more than compensated by his freedom from prejudice. Mental habitudes are at least as powerful as those of the body, and not at all more visible to their possessors. If Sir Joshua Reynolds carefully listened to the criticisms of children, few men, we conceive, would be degraded by giving some moments of their attention to even the casual remarks of those whose opinions are unfettered by system.

We claim no praise for the candour of our opinions, as we have in some degree taken them "upon compulsion;" for we have found, that while few have hitherto presumed to discuss with their physician the correctness of his prescriptions, and still fewer to follow their legal adviser through all the mazes of his practice, every one considers himself, as a matter of course, a complete adept in the science of education; and it has been for some time held as an axiom, that the only good reason for sending children to school, is want of time on the part of the parent for

their instruction at home. We doubt if a man could be found in the three kingdoms, sufficiently vain to make a similar avowal with respect to the repair of his old shoes. Such being the state of public opinion, we have found it convenient to bring our own ideas on the subject as near to it as possible; but although, as we have shown, something has been accomplished in this way, much remains to be done; for we have never succeeded in ridding ourselves of the prejudice, that it is one thing to have learnt, and another to be able to teach; that it is very possible to possess vast stores of knowledge without being able to impart them, even to the willing and anxious pupil; and that to fix the volatile, stimulate the sluggish, and overcome the obstinate, demands an acquaintance with the human mind, not quite innate, nor likely to be gained without some experience.

Another peculiarity in our case is, that the public teacher is judged of by a different standard to that applied to his humbler neighbour. The criterion by which the merits of the cobler are ascertained, is the length of time which elapses before it is necessary to renew the application to his skill; none think of requiring the exact circumference of his lapstone, or of informing themselves respect-

ing the particular species of hog to which he was indebted for his bristles. They only ask whether or not he is successful; and leaving the choice of means to his own discretion, they hold him responsible only for the end. But as regards the teacher, it has sometimes appeared to us, that public attention has been so much engaged on the modes of education, that it forgets to gain the requisite information respecting the final effect.

This peculiarity will, we know, be accounted for by the magnitude of the interest confided to the teacher; but, it should be recollected, that this importance ought not to change the method by which a judgment is formed; it ought only to subject the evidence, whatever it is, to a more rigorous examination. A better excuse is the difficulty of ascertaining what is due to the talents of the pupil, and what to the exertions of the master; but then a judgment ought not to be formed from one or two instances; in so important a research, no time or labour could be thrown away: and, if we may estimate the feelings of others by our own, nothing could be more satisfactory than an examination so complete, as should terminate in placing a boy in the hands of his teacher with a feeling of perfect confidence, or in not sending him to school at all. Yet we are

grateful for an interference which proceeds from a wish to benefit us; and finding public opinion, or at least public practice, to run in favour of such interference, we bow with all deference. We lay open our plans to inspection, and since criticism will come, we wish to prepare for its attack by a fortification of every point which appears to us to be at all exposed. Dropping metaphor, we are convinced, that parts of our system, taken by themselves, are open to objection; but we hope the majority of the "partial evils" are productive of "universal good," and that whatever of them have not such an excuse will be gradually removed.

We are told (and, after what we have said, we ought not perhaps to deny the position,) that the bystander sees most of the game; but we venture humbly to suggest, that he cannot possess this superiority, unless he be so placed as to see the whole board; for if his view of part of it be intercepted by a head or an elbow, he will be very likely to form erroneous conclusions. A good player will sacrifice many a choice move, because he cannot spare a particular piece from its place; but if the spectator be so situated that he cannot see the reason of the detention, he will be very likely to attribute to inadvertence, that

which is the result of deeper investigation than his own. In like manner, we have often had parts of our plan the subject of criticism, from which we could readily have defended them, if we could have entered into an examination of the whole system; but this is not to be done in the short time which a teacher can subtract from his labours for the purpose of oral explanation. This full investigation we are about to commence: we have already laid before our readers an exposition of our means, and we are now to explain the end we intend to produce, since means are valuable only in proportion as they are adapted to produce the end in view.

The great features of this object we hope will be already appreciated by the intelligent reader. We shall be disappointed if he have not already discovered, that by the establishment of a system of legislation and jurisprudence, wherein the power of the master is bounded by general rules, and the duties of the scholar accurately defined, and where the boys themselves are called upon to examine and decide upon the conduct of their fellows, we have provided a course of instruction in the great code of morality, which is likely to produce far more powerful and lasting effects than any quantity of mere precept. If

morality is a science as well as a practice (and who will deny the classification?) it must assuredly be a science of the highest importance:* but in every other branch of scientific education, that mode of instruction wherein the pupil is merely passive, as in listening, has been gradually changed for others which demand his active co-operation. Who would think of teaching arithmetic by lectures, in which he should work all the problems himself, while his pupil sat silent and inactive? or who could think the scholar likely to become a profound geometrician, whose master was contented with reading demonstrations to him? Indeed, it is an acknowledged truth among teachers, that no man can do them a

* On the momentous subject of religion we feel we ought to say something; and yet, in common we suppose with all conscientious teachers, whose pupils belong to different religious communities, we have had great difficulty in ascertaining our duty on this head. It is almost impossible to enter into any minute course of religious instruction without entrenching upon disputed ground; and yet we feel that no parents, except such as coincide with our own views, can intend us to influence the religious opinions of their children; and we should therefore conceive such influence to be a gross breach of trust. At the same time, whatever religious exercises can be joined by all, are not omitted. Whatever formularies too are in unison with the respective religious feelings of the parents, are taught, and provision is made for attendance on such public worship as is best calculated to prevent any dissimilarity of religious views between the parent and his child.

greater service, than by reducing every art and science, which the extending information of society from time to time demands, to be made a part of juvenile education, under the dominion of "Practical Instruction."

We shall not be called upon to prove, that, to give a knowledge of the science of morality is an excellent means of ensuring a correct practice of it; because, the position being universally allowed as respects every other department of human learning, we may fairly call upon the objector to show why the analogy, which holds good in every other instance, should fail here. But even if the effect of this science on the conduct of the student were as remote as it is immediate, still, exercising his mind, and extending his information, it would equally well deserve his attention, with the objects to which it is usually directed.

They, however, who will take the trouble to glance over the history of their early years, and call to mind the pertinacity with which their schoolfellows screened each other from the most clearly-deserved punishment; and the many acts of oppression which remained unredressed because the sufferers dared not to disobey the stern edict against "bearing tales,"—the only one in the community that

was never violated,—will think something done towards improving even the practice of morals, when they learn, that in an experience of more than two years,* one solitary instance only has occurred, in which the verdict of the Jury did not coincide with the opinion of the Master. Great, but of course unexpressed anxiety, has more than once been felt by us, lest the influence of a leading boy, which in every school must be considerable, should overcome the virtue of the Jury; but our fears have been uniformly relieved, and the hopes of the offender crushed, by the voice of the foreman, pronouncing, in a shrill but steady tone, the awful word—Guilty!

One exception there has been, and but one; and then it was the opinion of the attending Teacher, that the Jury did not understand the case. The boys who composed it happened to be very young, because the number present being unusually small, the elder scholars

* Trial by Jury was established early in 1816. This chapter was written in November 1818; since that time two other verdicts have been given, in which the Teachers did not concur; they were appealed against, as it has been already stated, and were reversed by the Committee. A remarkable instance of conscientious feeling was lately given by a Jury who convicted a boy on a charge of prevarication; though they were so much moved by the distress of mind which he evinced during his trial, as to pay half his fine from their own pockets. The remainder was immediately subscribed by the spectators.

were all engaged in the various offices of the Court.

The evils which the old system entailed on the weak and the timid have lately been portrayed by the hand of genius,* and have produced the effect upon the public mind which might naturally be expected from such facts, related by such a master.

Public opinion (as it has been somewhere said) very much resembles a pendulum,—the farther it vibrates from the centre, the farther does the next oscillation carry it on the other side: the danger seems now to be, lest in the public horror of boyish tyranny, a system of nursery-like *surveillance* should be adopted, which would be even more fatal to the future character. We have known establishments in which the boys were constantly under the eye of a tutor, and where every trifling injury was the subject of immediate appeal to the supreme power. The indulgence of this querulousness increased it, as might naturally be expected, beyond all endurance. Before the master had time to examine the justice of one complaint, his attention was called away to redress another; until, wearied with investigation into offences which were either

* Vide Cowper's Memoirs of his early life.

too trifling, or too justly provoked for punishment, he treated all complainants with harshness, heard their accusations with incredulity, and thus tended, by a first example, to the re-establishment of the old system.

By the plan which we have adopted, the trouble of petty investigation devolves on the leading boys, for each is at one time or other called upon to fill the office of Magistrate; by this means an interest is created among a body, much more influential than the Masters against frivolous accusation. While we are upon the subject of jurisprudence, we will remark, that no teacher can, with a proper attention to the duties of his office, afford the necessary time for examination sufficiently complete to preclude all possibility of injustice. Who cannot recollect, when with swelling breast he turned from the magisterial tribunal, bearing a punishment which was undeserved, and might have been escaped, if he could have been allowed a few moments for explanation? The right of appeal, and the absence of corporal punishment, preclude this danger. Proof, comparatively slight, will suffice to put the accused upon his appeal; and thus the master may exercise his prerogative with the promptitude so necessary to check those little disorders, which will be constantly arising in

every school, while human nature shall retain its present attributes. We forbear to descant on the advantages of learning in early life to weigh evidence, and balance probabilities; because we have not undertaken the task of uttering all that could be said by a zealous advocate, but only what appears to be necessary to show the propriety of our aberrations from received plans, whenever we have made any.

Of our legislation we have little to say, except that we have never found the slightest disposition in the Committees to slacken the reins of discipline. They have even passed many laws restrictive of their liberties; they naturally and fairly demand the reasons for such restrictions to be laid before them, nor have they ever shown themselves incompetent to judge of their value.

In the present state of society, a knowledge of the principles of legislation must be valuable in every rank of life. There is scarcely any man who is not sometimes called upon to assist in framing laws for the government of institutions for either religious, charitable, commercial, or literary purposes; and every one will have occasion to regulate the conduct of his family. If it were only that the boys learned the forms by which public business is carried on, practised as they are

among them with punctilious exactitude, they would at least gain the advantage of being prepared to fill their future places in society, without the trouble and pain of initiation.

Of our punishments we may be able to say more at a future period; at present we are trying the experiment whether corporal punishment may not be entirely abolished: the plan has had a trial of nine months, and the result is hitherto favourable; but until more time has elapsed, we must not speak too confidently.* In a few instances it has been found or supposed necessary, to resent insolence by a blow: but this may be rather called an assertion of private right, than an official punishment. In these cases a single blow has almost always been found sufficient, the rarity of the infliction rendering severity unnecessary.

Confinement, and disability to fill certain offices, are our severest punishments;—public disgrace, which is painful in exact proportion to the good feeling of the offender, is not employed, and every measure is avoided which would destroy self-respect. Expulsion has been resorted to, rather than a boy should be

* The plan has now been in operation more than four years. We cannot imagine any motive strong enough to force us back to the old practice.—March, 1822.

submitted to treatment which might lead himself and his schoolfellows to forget that he was a gentleman.

Heretofore every classification of rank by the Master, according to the intellectual and moral qualities of his pupils, was powerless the moment his boys had passed the door of the school-room. On the play-ground, the best classic was one of the "*profanum vulgus,*" when his learning was put into competition with the *science* of the boxer; but if the rank awarded by their companions be ever dearer to schoolboys than that bestowed by the Master, (and for proof that such is the fact, we appeal with confidence to the recollection of every one of our readers,) it will not be deemed an unimportant addition to his power, that the boys are now thrown upon the necessity of bestowing the offices which give rank to those of their number who have some better qualifications for filling them than go to the adornment of the accomplished bruiser; a necessity arising from the interests which they entrust to the care of their Committees, their Judge, their Sheriff, and their Magistrate. On the other hand, the *notables* themselves are induced to cultivate a very different species of manners to that usually in vogue among elder schoolboys, in order to ensure the general suffrage.

Farther, by giving the elective power, in the ratio of acquisition, the choice is ensured to that class of boys whose example ought to carry most weight.

Thus have we laboured to induce in the minds of our pupils a constant motive for mutual examination, and a constant feeling of mutual responsibility. Our last means is our Court of Character. Whenever a boy above the age of thirteen leaves the school, a Sub-committee is appointed to draw up a report of his conduct and acquisitions. This ordeal, growing into importance in the eyes of the pupil as the period for undergoing it approaches, must furnish a powerful motive to excellence in those whose example is most likely to be followed; and it also fills the place of the artificial incitements offered by the Master, which, however strong in very early life, gradually lose their force as the time draws near when the pupil will no longer be subjected to their influence.

By thus directing the minds of our pupils towards the real merits of each other, we have also, we hope, secured the alliance of that powerful feeling, love of sympathy; which, according to Dr. Adam Smith, is the foundation of moral sentiment. Perhaps the proposition might be generalized with advantage.

Perhaps love of sympathy might rather have been considered the power which brings the wishes and opinions of the individual into unison with those of society, whatever they may be. If this notion be correct, it must depend on the good or bad state of society, whether love of sympathy shall have a moral or an immoral effect upon individuals. How often have war and superstition, to say nothing of minor causes, warped the opinions of mankind in their favour? Could it be reasonably expected, while the highest honours both in earth and heaven were, by our northern ancestors,* held to belong of right to the destroyer of his species, and to him only, that love of sympathy should have any other effect than to stimulate the war-fever to madness? Or when, in a later age, every sin was believed to be fully atoned by pilgrimage, the founding of monasteries, or wearing the cowl, how could love of sympathy restrain the grossest outrages on the peace of the community, while public opinion held out so easy a reparation? A school is but a nation in miniature; and the teacher who would secure the co-operation of the best and strongest motives, must be no inattentive reader of history.

* Mallett's Northern Antiquities.

We know that the love of sympathy will act in one way or other, and act forcibly; and it is a matter of anxious importance with us, that its force should be in alliance, and not in conflict, with the precepts of religion and morality. And hence the necessity of directing the attention of our pupils to those qualities of their schoolfellows which consist with good morals, and of imposing upon them the necessity of placing at their head boys who will be most likely to give a high tone to the public feeling.

Our little system of jurisprudence will also be found to increase, or at least preserve, the value which the scholar attaches to the sympathy or approbation of his master. When the *lex non scripta* which obtains among the boys, is at variance with the statute law enacted by the master, it is evident that his praise or censure must sometimes contend with public opinion; and in this contest it will inevitably succumb, or at least lose very much of its force. The same effect will be produced when he is solicited, every hour of the day, to hear frivolous complaints. His opinions are sure of being disregarded from the frequency with which they are expressed, if they do not, in some degree, deserve neglect from the hasty investigation upon which they are formed. But where the rules of judgment on which the

master acts, are the same with those adopted by the scholars; and when his approbation or displeasure is not worn out by excessive use, its calm and deliberate expression must produce a deep and lasting effect, and excite in the bosom of its object serious reflection.

The second great end which has been kept in view in the construction of our plan, is a strict economy of time. When the conscientious teacher reflects that this, the most valuable property of his pupils, is entrusted to his disposal, he must feel a heavy responsibility upon him, that not even the smallest part of it shall be spent without purchasing its value. We have been startled at the reflection, that if, by a faulty arrangement, one minute be lost to sixty of our boys, the injury sustained would be equal to the waste of an hour by a single individual. Let every Teacher keep this truth before him, and minutes will then dilate, in his mind's eye, to a magnitude too imposing to allow of neglect.

In order to accomplish our purpose, we first found it necessary to induce an almost superstitious punctuality on the part of the Monitor. This was not done without considerable difficulty; and the principle by which it was effected was the discovery of chance. When the duty of the Monitor was easy, and he had

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time for play, the exact moment for ringing the bell was but seldom observed; but when, as the system grew more complex, he was more frequently in requisition, it was found that with increased labour came increased perfection; and the same boy who had complained of the difficulty of being punctual when he had to ring the bell only ten times in the day, found his duty comparatively easy when his memory was taxed to a fourfold amount. The principle lies in the circumstance of the boy's mind never having time to divest itself of its care. It is amusing to see what a living timepiece the giddiest boy will become during his week of office. The succession of Monitors gradually infuses a habit, and somewhat of a love of punctuality, into the *body scholastic* itself. The Masters also cannot think of being absent when the scholars are waiting for them; and thus the nominal and the real hours of attendance become exactly the same. By this precision another important advantage is gained. The pupil feels sure that the time by which the lesson was appointed to be learnt, will, with a fated certainty, be that at which it will be required to be said; this will in most cases be found of itself sufficient to ensure the accomplishment of the task.

Great care is taken that no boy shall, at any

moment of the day, be obliged to sit in idleness, under any pretext whatever; when the stated quantity of labour is performed, he goes to play; but while he remains in the school-room, he has no right to be an instant unemployed. The reward of industry, a short cessation from labour, is immediate; so that a lively boy is not doomed to

"Count the slow clock, and *play* exact at noon."

On the contrary, instead of watching with feverish impatience to see both the hands *culminate*, he employs himself ardently at his task; the instant he has accomplished it, constraint ceases, and he "breathes empyreal air."

If the time of the scholar ought to be kept sacred from waste, it is of equal importance that the labour of the Teacher should be expended so as to produce the greatest possible effect. To us it has appeared, that he can scarcely be so well employed as in giving to his pupils a clear and full explanation of the various difficulties which arise to impede their course; but this cannot be done unless they study in classes, for a separate conversation of a single minute with each boy, will occupy as much of his time as one of ten minutes with ten boys: how little can be done in one minute in the way of explanation, and how much in ten, as a mere question of arithmetic, is too clearly

in our favour to need a comment. The experienced teacher will be aware that the ratio is, in effect, greater than this; for by attempting to compress that matter into the space of one minute which ought to occupy ten, he will probably convey no information at all, and run a risk of confusing and discouraging the pupil, by increasing his idea of the difficulty, and exciting his repugnance to encounter it.

By teaching the mathematics in classes, we gain an opportunity of showing and explaining the nature and use of different instruments, as well as of the various weights and measures, and of elucidating the many barbarous terms which the writers on commercial arithmetic have cast, like stumbling-blocks, into the path of the young student.

By teaching penmanship to several boys, all employed in writing the same copy, the master has time to lay down by rule, as well as to exhibit by exemplars, the relative proportions of letters and spaces.

By hearing the pupils construe in classes, the Teacher may take care that no allusion passes unnoticed through the mind of the learner; being relieved from the long and irksome labour of hearing the same sentences time after time, he has opportunity and spirits

for entering into a more close and complete explanation of the whole task.

After furnishing the pupil with the *opportunity* of spending his time to the greatest advantage, our next care was to examine how we had provided for supplying him with *motives* to an advantageous employment of it.

Leaving out of consideration the motive of sympathy, of which we have already spoken, they may be ranged under five heads: Love of knowledge—love of employment—emulation—hope of reward—and fear of punishment. We have placed them in what appears to us to be the order of their excellence. Some of our readers may perhaps think that emulation stands too low in the scale; for it is common and very natural to suppose, before a trial of the experiment, that emulation alone is a motive sufficient to overcome all obstacles, and carry the student to the goal of his destination without suffering him ever to flag in his course. But emulation is a stimulus, and it is in the very nature of stimuli to lose their power when constantly employed. Indeed such a state of excitement, as in the absence of all other motives would be sufficient to produce the desired effect, would be too powerful for the human mind to bear for any length of time. It

may be very useful as a temporary expedient, and the skilful instructor may sometimes find it accord with his views to blow up a vivid flame for a particular purpose, but he must be aware that extraordinary exertion is always followed by extraordinary languor.

For the gentle and temperate exercise of emulation, we have, we think, sufficiently provided. Indeed, where numbers of boys are collected together, so large that every one has competitors equal, or nearly equal, in years, talents, and acquisitions to himself, where almost every study is social, where the progress of the students is so often compared, and the rank of each so nicely adjusted, it would be very difficult, if not impossible, to prevent this motive from exerting every fair and safe power over the minds of the pupils.

The fear of punishment and the hope of reward, besides being liable to the same objection with emulation, as to the comparative transitoriness of their power from too frequent use, have their peculiar disadvantages. No mind can be constantly under the dominion of fear, without falling into miserable, and often irretrievable, degradation; nor can it be expected, that pursuits closely associated in the memory with this most painful feeling, should

be followed a single moment, after coercion is withdrawn.

Much as all men are inclined to magnify the importance of their own profession, we are compelled to avow, that we think no advantages of education ever likely to be reaped by a pupil in such a state of mind, can compensate him for the pain and injury which will accompany their acquisition. The latter evil does not attach itself to the *hope of reward*. But this motive is open to objection, inasmuch as it gives to the pupil an object different to the real end of education. Improvement being lowered in his mind to the rank of a means, is not likely to be followed after the reward is obtained. Nor is this the worst effect: the pupil, instead of taking a general view of the subject, and indulging himself in those collateral speculations upon it, which tend so much to show him its real bearings, considers every thing besides the mere straight-forward accomplishment of his task, according to the prescribed form, as so much exertion thrown away. Under these impressions, we have endeavoured that our punishments may rather be certain than either painful or degrading: our rewards are various, that they may be adapted to variety of disposition; and light, that the enjoyment of them may not be followed by

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satiety, nor draw aside the inclinations of the pupil.

Many boys are carried forward in the course of instruction from the mere love of employment. Being required to attend so many hours to certain studies, and not being allowed to spend their time in any other manner, they seem to require no further stimulus, and gaily sit down to their task. This happy disposition, rather perhaps given by nature than induced by art, will be very effective, if care be taken to place no difficulties in its way, which a fair degree of exertion will not surmount. We have placed this motive high in the list, first, because it is permanent, and may be expected to act after the period of compulsory education shall be passed; and secondly, because it has no ulterior object to call away the attention of the scholar from the pure acquisition of knowledge. Yet, as it engages him in study merely because that is the only object on which its exertions can be expended, there is no certainty that study will be preferred, when his choice of objects will be unfettered; therefore even the love of employment must yield in excellence to the love of knowledge. This combines within itself all the excellencies which belong to the others, without partaking of

their defects. It is permanent. Its power increases, instead of diminishing, with exercise. Difficulties, to a certain extent, add to its force; and it can rarely be diverted from its object, by the temptations which offer themselves in such profusion to the young man the moment restraint has loosed him from its hold. Above all, it directs the pupil to the acquisition of real, efficient information. To us it appears a matter of such importance to induce this motive, that we think, if it were possible for the pupil to acquire a love of knowledge, and that alone, during the whole time he remained at school, he would have done more towards ensuring a stock of knowledge in maturer age, than if he had been the recipient of as much learning as ever was infused into the passive schoolboy by flogging or coaxing. Why are self-educated men so successful, notwithstanding all their disadvantages, but because they study from a sincere attachment to the art or science to which they apply? They do not go to the *grinder* to be prepared to *stand* an *examination*; nor do they fill their heads with a heap of crude ideas, which they only wish may *keep* until *the day* is past, when they will be turned out as so much rubbish; the student feeling that they never can afford

him the least possible quantity of either pleasure or utility.

The best means of exciting a love of knowledge will be readily discovered, if we reflect a few moments on the origin of knowledge itself. Every acquisition would at first be made from an immediate view of utility. No man would undergo the trouble of investigating the nature of plants, unless he, or his friends, stood in need of their medicinal virtues. The motions of the heavenly bodies were first observed by sailors and husbandmen. As mankind became civilized, a prospect of advantage more and more distant sufficed to induce their exertions; still that prospect, though remote, was visible, and beguiled the toilsomeness of the road. But in the present state of education, the young traveller is expected to set out without having the most distant idea of the end of his journey, or the cause for which he travels; for how can he, by any vigour of intuition, even imagine the future fund of pleasure and profit which is to accrue to him from committing to memory "*Propria quæ maribus:*" or from poring into the mysteries of long division, with a dirty slate before him, and the *frustrum* of a pencil, half an inch long, in his fingers, heaping one set of figures upon the ghosts of their predecessors?

Let us not be misunderstood; we are not quarrelling with either the Eton* Grammar, or The Tutor's Assistant, two books for which we have all possible respect; we only mean to show, that very much more is expected from children than is at all times admitted.

We are aware that until the opinions of society undergo a great alteration, it will always be necessary for the teacher to lead his pupil through many dark and intricate defiles, and to direct him to confide in his experience, for the assurance that he will at last emerge into light. But is nothing to be attempted because every thing cannot be accomplished? It is certainly possible so to modify the course of instruction, that the pupil shall now and then catch a glimpse of the promised land; and this is all we attempt.

Every boy, for example, can find reasons why the power of translation is valuable; let the tutor then ascertain by a careful examination, how much knowledge of the grammar will enable the scholar to begin to construe; and engage him as soon as possible in employment which shall have some respectability in his eyes. We do not mean to say that the grammar shall be laid aside; let the progress in it be concurrent with that in translation,

and let the scholar be taught the value of the grammar as a book of reference.

In arithmetic, the means are more obvious. The common mode of teaching arithmetic is to commence with abstract numbers; but, is it possible for a child to see, that any thing is gained by adding together long rows of figures to which no meaning is attached? Certainly not: and hence the irksomeness of the early stages of that science. Again, what master but must have observed that his younger pupils, after working a problem, are sometimes perfectly ignorant of the effect which has been produced, and are unable to write an answer to the question proposed? In such a case, what has the pupil gained? Some little increase of expertness in adding, subtracting, multiplying, and dividing, perhaps; but is there no countervailing loss to be deplored? Is not the pupil's mind suffering injury by thus blindly applying means without knowing what end is to be effected, and sometimes without being conscious that any object is intended to be attained beyond that of exercising his patience? We think that neither the mind nor the temper can remain uninjured, or at least unendangered, by constant subjection to such a process; and if some sacrifice of time were rendered

necessary by an alteration which should obviate such evils, it would not, in the opinion of the judicious parent, be thrown away. No sacrifice however is demanded, except perhaps a small one on the part of the master, who is amply repaid by the cheerful and ardent co-operation of the pupil.

We commence arithmetic with easy questions, the scope and utility of which the little pupil can readily comprehend. Every child at once feels that he has made an important and valuable acquisition, when he has learned how to calculate all the various little problems which may be constructed respecting his tops and marbles, their prices and their comparative value. It is of little consequence whether these questions are carefully arranged or not; their being miscellaneous will only more agreeably exercise the mind of the scholar, if care is taken that the simple operations, the multiplying and dividing, the subtracting and adding, are not of themselves too difficult.

There is almost always a reason for every custom, which renders it eligible at the time of its establishment. That of commencing with mechanical operations partly arose, we conceive, from the difficulty which instructors found in teaching their pupils to extract the numbers from a question, and to place them

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so as to be worked by the arithmetical machinery. With the assistance of our chalking-boards and classes, we have conquered this difficulty. If no boy of the class can state the question, the master does that without loss of time, which by the common mode is done after a period of idleness—he goes through the statement himself. By united efforts the problem is answered before the meaning of the question, and the curiosity excited by it, have faded from the mind of the learner. Another question is immediately given; practice soon presents every difficulty in every variety; the young scholar begins gradually to see the use and value of signs, and daily exercise renders the increasing lines of numbers easily manageable.

While on this part of our subject, we must acknowledge our obligations to what is called Mental Arithmetic; that is, calculation without the employment of written symbols. Of the extent to which this art may be carried, the memoirs of Porson, Jedediah Buxton, and the American youth, Zerah Colborn, (if we may be allowed such a discordant union of names) will furnish ample evidence. We cannot boast of any feats which will at all bear comparison with theirs, yet some facts have been stated which may have astonished those

who have not estimated the combined powers of youth, ardour, and practice.* It would not be easy, in the few words which we can spare for the subject, to enlarge upon all the uses of Mental Arithmetic; the rapidity of its operations, the powers of abstraction which it gives the pupil, the advantages which it confers in transacting the business of real life, and the amusement with which it supplies the mind, under circumstances where none but strictly mental employment is practicable. Nor is such a discussion necessary to our present purpose, which only regards its value in the opinion of the pupil. Every child soon becomes interested in the common concerns of the world, and every thing like real business acquires an air of respectability in his eyes; it is therefore easy, by assimilating the questions to those which actually occur in the transactions of life, and by calling upon him to answer them in the mode in which he has found them answered by his friends and their tradesmen, to show him that he is rising into usefulness as he becomes master of the subject. The motive in this instance is mingled with another, which ought, perhaps, to have had a separate attention, namely, love of imitation. The

* Page 16.

child imitates the youth, the youth imitates the man, and every man, until his habits are fixed, feels a disposition to imitate those above him: love of imitation may therefore be made a powerful incentive to the acquisition of knowledge, if the teacher be careful to show the connexion between cause and effect in its clearest light.

To return to our immediate subject; all the operations of Surveying are, by the same feeling of utility, joined to the love of imitation, rendered extremely pleasant to boys; nor is their enjoyment lessened by the necessity of performing their labours in the open air. Thus engaged, they feel that they are employed in real business, and have an opportunity of measuring their attainments with those of men. Many of their former studies are at once brought into use; they now see the reason for an accurate acquaintance with the laws of numbers and spaces. To a familiarity with arithmetic, mensuration, and trigonometry, they must join the manual facility of constructing maps and plans; they exercise their discretion, in choosing points of observation; they learn expertness in the use, and care in the preservation of instruments; and, above all, from this feeling that they are really *at work*, they acquire that sobriety and

steadiness of conduct, in which the elder schoolboy is so often inferior to his less fortunate neighbour, who has been removed at an early age to the accompting-house. And here let us pause a moment, to lay down a general position. Whenever the scholar can be led to engage with pleasure in a pursuit, which demands a considerable fund of subsidiary knowledge, the tutor gains two very important points. First, he renders himself certain that his pupil is in possession of what he has been heretofore taught; or what is, perhaps, even better, he ensures the desire of self-improvement in order to supply the defects of memory; and secondly, he lays before the boy's eyes the utility of various branches of instruction. How often does the desire of acquisition begin to operate in a few months after the close of education; and what produces such a change? The experience, however short, of the utility of acquisitions which were perhaps lately despised. If, then, any means have been devised of inducing such a sentiment, while the time and opportunity of improvement remain unimpaired, something has been done to spare the future man many moments of painful retrospection. "Every person (says Gibbon) has two educations, one which he receives from others, and one, more important, which he

gives to himself."* The latter of these is seldom begun till the former is ended; an earlier commencement of it would perhaps ensure greater success to both.

In speaking of the advantages of real business, we may be allowed to mention again the transactions of the Committees, and Courts of Justice, which are all recorded, and thus furnish no unimportant exercise in a very exact and useful kind of *composition;* a department of education which we confess has often caused us considerable uneasiness. We fully agree with Miss Edgeworth, that "no person should be expected to write, unless he has something to say;" indeed, the utter uselessness of any other composition than that which is employed as a vehicle for the communication of ideas, must excite, even in the mind of a child, a contempt even to loathing. We dare not calculate the mental injury which must necessarily ensue, "from the Egyptian compulsion under which some young people are placed, of thus making bricks without straw."† Do we not despise in the adult all composition but that which proceeds from a mind stored with ideas? What are our opinions respecting paucity of thoughts and profusion of words?

* Life and Letters. † Locke.

Why has every system for teaching composition to men failed of producing any thing great? Why has the science of Rhetoric itself fallen into contempt, but because style is merely the *channel*, not the water, and if scantily supplied becomes an object of derision, in exact proportion to the labour with which it was excavated? If this representation is correct, it certainly must be conferring, at least, an equivocal benefit on a youth, to force him to collect his few poor and scattered ideas together, and send them shivering along the cold and barren periods of a school theme, reminding the master of the broth of old Milnwood, where, "in an ocean of liquid, were indistinctly discovered by close observers, two or three short ribs of lean mutton sailing to and fro."*

The resources of every youth are necessarily bounded; years must pass before his ideas can have had the requisite seasoning (to use a homely phrase); and until the period of mature age, original composition can only tend to vitiate his taste, and lower his standard of excellence.† But there are other means open

* Tales of My Landlord, 1st series, vol. ii.

† Milton, in his little work on Education, reprobates the practice of "Forcing the empty wits of children to compose themes, verses, and orations, which are acts of ripest judgment,

for acquiring the minor qualifications of grammatical correctness, and tact in the choice of words, and of these we avail ourselves. Translations, both in prose and verse, are expected from the senior boys, and they are also frequently employed in taking notes of lectures, from which they prepare reports. The utility of these occupations is sufficiently obvious to the pupil, and hence they are followed with zest.

That such a system of education will not be unfavourable to originality in after life, we have high authority for believing. It was the opinion of Sir Joshua Reynolds, that even in painting, which draws all its learning from outward visible nature, no man can be original to any good purpose, until he has made himself master of what is already known, not in detail, of course, but in principle. "The daily food and nourishment of the mind of an artist (says he) is found in the great works of his predecessors. There is no other way for him to become great himself. *Serpens nisi serpentem commederit non fit draco* is a remark of a whimsical natural history which I have read, though I do not recollect its title; however

and the final work of a head filled by long reading and observing, with elegant maxims and copious invention."—"These are not (he continues) matters to be wrung from children, like blood from the nose, or plucking of untimely fruit."

false, as to dragons, it is applicable enough to artists."*

If this be true in painting, we are sure it will not be denied in literature.

A taste for the acquirement of knowledge is also powerfully promoted by a careful attention, on the part of the master, to match the difficulties of the learner so exactly with his capacity, that he shall not, on the one hand, give up the pursuit from despair, nor on the other, despise a victory obtained without effort. It is difficult to avoid suffering from the operations of these opposite evils at one and the same time, for a progress by far too rapid to suit the heavy pace of one child, will perhaps be too slow for the celerity of another. Our arrangement into classes may seem, at first sight, to be very obnoxious to both these disadvantages; but such is not the case. On the contrary, it furnishes us with the means of adjusting the ratio between a boy's powers and his task, to the greatest possible nicety.

Each of our arithmetical classes, for example, has a certain range, a certain number of arithmetical rules, through which it passes and repasses without ever travelling into any other department. The place which each boy

* Reynolds' Works, vol. ii. 12th Discourse, p. 92—100.

occupies points out to the Teacher the state of his advancement; and as soon as he is found competent, he is removed into a higher class. With some boys, it is only necessary to go over the ground once; others travel the same road again and again; no one leaves it before he is thoroughly acquainted with it; and no one stays in it after that acquisition is made.

As arithmetic is commonly studied, it is not practicable, and perhaps not advisable, to put a stop to what is technically called *cabbaging*; for there must ever be difficulties, which some pupils cannot overcome by their solitary exertions, and of which no master can possibly find time for separate explanation to each individual. But the copying system, though perhaps in ordinary cases necessary, is nevertheless highly objectionable.

In the first place, it is a breach of the laws, and, becoming habitual, removes all compunction for breaking, not only the law in question, but others. It misleads the Teacher, who apportions the pupil's task according to a false estimate of his acquisitions. By offering a succedaneum for mental exertion, it gradually destroys all motive to it. By carrying a boy beyond his point of real acquisition, this assistance becomes essential to him in future; for, not having the subsidiary information on

which his Teacher calculates when he sets the task, he can by no other means fulfil it. Thus, a disingenuous concealment of the real state of the pupil's mind is not only fostered, but rendered necessary to avoid the disgrace of detection. It would be tedious to recount all the mischiefs which result from this surreptitious removal of difficulties; even when only employed occasionally, its bad effects are neither few nor unimportant. In copying the solution of a problem by wholesale, even the student, who is anxious to learn, will often remain ignorant of the reasoning on which the operation depends; for when it is at all complex, it can rarely happen that he transcribes the figures into his copy, in the exact order, with respect to time, in which they were set down in the exemplar.

We are also averse from boys being dependent for explanation upon other boys; for we have generally found that both he who learns and he who teaches, are satisfied with any information which is sufficient for a particular purpose; they do not (nor can we wonder that they do not) generalize their views, or enter into such a discussion as shall render future assistance on a similar point unnecessary. Such a conference, if they were able and willing to enter upon it, would, in most schools, be quickly interrupted by a stroke with a cane,

as a punishment for disturbing the public silence. The evils of *cabbaging*, in all their many divisions and subdivisions, we are happily rid of by teaching in classes.

In the lower classical forms, we have, to a limited extent, adopted the mode of teaching by translations. It would be too great a tax upon the time of the general reader, to present him, in detail, our reasons for differing with some eminent men on this point, as it would lead us into a long inquiry respecting the nature of language, and another equally laborious respecting the nature of the human mind itself. At some future period, we hope to be indulged in adding our speculations upon these important points to our little work;* until then we shall satisfy ourselves with succinctly showing, that the analogy between copying the solution of an arithmetical problem, and reading a translation, has been rather hastily formed. The solution of an arithmetical problem depends solely on the exercise of the reasoning powers; therefore as little assistance as possible ought to be given, in order that these powers may be called forth. But even in science, the most eligible method has been practically found to mingle *example* with *rea-*

* This we have now done, in chap. iv.

soning, at least in the exercises of the younger students. Language, on the other hand, is for the most part a collection of authorities, or facts, and of course that method by which the pupil can ascertain those facts in the readiest manner, must be, other things equal, the best. Translation is evidently the readiest means, because it gives the pupil a dictionary of the sentence under examination, with the words arranged to his hands. The mischiefs of copying would be much reduced, if the pupil were examined as to his knowledge of each problem, after he had transcribed the solution of it; if he were constrained to explain how each line arose, and how it assisted the progress of the work. This the young linguist is under the necessity of doing by the processes of construing and parsing; for it should be remembered, that, in a translation, the original is not rendered word for word; nor is the same order preserved in one language as the other; therefore, to enable himself to construe the sentence, the learner must match word against word, with a precision which will require him to alter many words of the translation, for which purpose he will find it necessary to consult his dictionary; but then he goes to it with some knowledge of what he is in search of, instead of ranging through a chaos of contra-

dictory meanings, at a loss which to choose, and astonished that a word, which seems to have such a multiplicity of significations, could ever convey a certain idea. By parsing, too, he is compelled to acquaint himself with the stems of words, in which he is materially assisted by a previous knowledge of their meanings; so that he becomes as familiar with them as he can possibly do by any process, however difficult.

But our grand objection to the old plan is, that it furnishes, in its numerous difficulties, a constant excuse for indolence. It is impossible for the master to enter into the boy's mind, and discover whether his ill success proceed from want of power or from want of disposition. We shrink from the danger and cruelty of stimulating a docile and ardent child to a task beyond his powers; we are afraid to lose his confidence in our knowledge of what ought to be expected from him; we are afraid of souring his temper, and uniting painful associations with his task, which may spread over every department of knowledge, and force his thoughts and his tastes into a different, perhaps hostile, course. After all, we wish it to be clearly understood, that our departure from ancient custom is always made slowly, and with trepidation. Whoever has

ventured upon alterations in any established methods, must have found, that if usage often outlives its original cause, it still more often outlives only the remembrance of it; and they who dig at the foundation of that which is established, with a view of showing its weakness, and hastening its fall, frequently make the unwelcome discovery, that "it is built upon a rock."

We come next to consider the pleasure of success, as an auxiliary in the inducement of a love of knowledge. That no rational being would continue exertions attended only with disappointment, beyond a certain period, will not be denied; and that until the pupil is fortified with the memory of repeated success, every failure will tend to relax his ardour, is equally obvious.

It is of great importance, then, that the pupil should, very early in life, have an opportunity of tasting this pleasure; and in order to ensure so desirable an end, we have been careful to attach rank to excellence in each department; sometimes ranging our pupils in the order of classical attainments; then as mathematicians; then according to manual excellence; and lastly, according to their general conduct and behaviour. Thus each boy, in his turn, attains rank and consideration in that

branch of study wherein nature has fitted him to excel, and where comparatively moderate efforts will ensure success. If this were all, if our plan merely served to carry each boy onwards in the path which nature had pointed out for him, we should consider a valuable point to have been gained, inasmuch as we hold single excellence in higher estimation than various mediocrity.* But the cause continues to operate. The confidence that exertion will be followed by success, being established in his mind, will cheer him on in other departments of education. Parents are often afraid that a favourite pursuit will be followed by their child with so much ardour as to withdraw his attention from others, which appear to them to be more valuable. It generally happens that the natural volatility of youth soon changes its object; and then, if what we may denominate the habit of ardour has been in-

* This freedom of action is one of the fundamental principles of the system of Pestalozzi:—"L'éducation doit être libre et naturelle, au lieu d'être gênée, contrainte artificielle, servile et pour ainsi dire, et factice: elle laisse l'enfant se développer en liberté tout entier, et *prononcer fertement sa véritable nature.*"—*Esprit de la Methode d'Education de Pestalozzi, par Jullien,* tome i. p. 99.

"Le cours général des études embrasse un assez grand nombre d'objets, mais leur variété même sert a délasser agréablement l'esprit et laisse aux enfans la liberté de choisir ceux qui ont plus d'analogie avec leurs dispositions naturelles."—*Esprit,* &c. tome i. p. 83.

duced, it is carried to the new pursuit. But if the love of a certain art or science were indeed so firmly rooted in a boy's mind as to resist all the charms of novelty and fashion, and all the attacks of satiety, we should shrink from what we could almost call the impiety of dragging him from avocations to which he must have been destined by an authority to which all human power must submit.

Such instances, however, are very rare: for the most part, the only effect of showing some indulgence to the predilections of youth, will be, that, in place of uniform listlessness, every task will be performed with spirit; and every branch of learning will be, in its turn, the object of intense avidity. There is always a natural facility for making one acquirement rather than another, and with that the pupil's ardour will commence; but, except in a few instances, the difference of capacity for one study, in preference to another, is but slight, and will gradually waste away before the influence of circumstances. Nor, on the other hand, should it be forgotten by those, who, in their eagerness for one acquisition, despise every other, that in the web of knowledge no thread can be traced, without pointing out something of the course of others. It is an undoubted fact, that no man can acquire great

eminence in any one branch of learning, (exact science alone excepted,) who has made that branch the sole object of his attention.

We have now only to dispose of one other means of exciting a love of knowledge, and our task will be drawing to a close. This is to give the pupil clear, vivid, and accurate conceptions.

It is astonishing what interest is at once given to any event, however trifling, if we are acquainted with the place wherein it happened, or the individuals who are the actors in it, though it may very slightly affect their interests; and they are perhaps persons for whom we have but little affection or esteem. Who does not feel happy to realise, by actual observation, his mental picture of cities and landscapes? Why is it that those who are present sympathise more completely with either the joy or grief of their friends, than those who are absent? It is because interest is produced by vividness of conception, and vividness of conception is in the ratio of proximity to the sensible cause. Thus he who is present at a painful accident, feels more than he who only hears the relation of it from a spectator; and he, again, who has learnt all the circumstances from an eye-witness, will produce more effect in relating the story, than

one who has obtained them by a more circuitous route.

From this very simple and well-known truth, the teacher may derive an important lesson. He may learn the advantage of practical illustration: he will find that his time is well employed in showing his pupils many things which he might otherwise think they would as well imagine for themselves. We should advise him to provide himself with the various weights, commonly spoken of, and the measures of content and of length. Let him portion off upon his play-ground a land-chain, a rood, and, if the extent be sufficient, an acre. Let his pupils, when they read history, be furnished with maps to trace the *routes* of armies; let them be shown plans of towns; plates exhibiting the variations of costume which distinguish one people from another; or at least let them have access to these latter documents (as they might very justly be called) in the library of the School: and then so very delightful is it to boys to fix and verify their ideas by means of the senses, that much knowledge will be gained in this way by the pupil, without any other care on the part of the master, than to furnish him with the requisite opportunity. Indeed, we have sometimes wondered that instructors have not more fully

availed themselves of the multiplicity of little works which the press almost daily issues, to furnish their scholars with a fund of entertainment and useful general information; which has so great a recommendation as that of diffusing itself among them, without calling for exertion on the part of the master.

In treating on the value of accurate conceptions, we must not fail to call the attention of the reader to the importance, in the first years of education, of suffering the pupil to become very familiar with elements. Early youth is the best time for acquiring elementary information. There is a period in life, nor is it a very late one, when the mind begins to revolt against entering upon any branch of knowledge, with which it is entirely unacquainted; and many remain in ignorance who would pursue pleasantly the abstrusities of a science, if they could prevail upon themselves to master its elements. Therefore, since no after-knowledge can be very complete or extensive, which is not built upon a good elementary foundation, we strongly advise parents to be satisfied with somewhat less of superstructure than is generally demanded, while the pupil has yet the power of enabling himself to enlarge his future acquisitions without pain and degradation. To us it appears of infinitely more im-

portance, that education should be sound and complete, than precocious. On the other hand, when the period for elementary education is past, the mind becomes dissatisfied, unless it feels that something efficient is done. It is in vain for the instructor to hope that stimulants, which were powerful at eight or ten years of age, will urge the mind at fifteen. The boy begins to feel that he shall soon be called into another sphere of life, where mere school motives are not to be found. That minute and formal correctness which was so proper at an early age, must now be relaxed; and general and previously formed habits must be depended upon in its stead. The minutiæ of the drill would be out of place on the day of battle. The side of danger is now changed; heretofore the principal care of the teacher was not to overload the mind of his little pupil, lest he should extinguish the feeble and lambent flame of ardour; but now, the fuel may be heaped with no sparing hand. The pupil has acquired a knowledge of his own powers; he has, if we may so speak, learnt the art of learning. He will know whether his obstacles arise from the innate difficulty of the subject, or from want of previous information, which perhaps he may have acquired and forgotten. In the latter case, a powerful and

excellent motive is furnished for private voluntary application: in the former he has found himself too often successful to fear the contest. But if the teacher, unaware of this change in the mind of the pupil, irritate him by requiring that mere formal perfection which demands a mind unoccupied with the labour of investigation, he will find to his astonishment that the very boys who gave him greatest satisfaction at the outset of their studies, become careless, and perhaps morose, at the time when he had fondly anticipated increased ardour and voluntary co-operation.

And now, having presented our friends with the detail of our system, and with the general principles on which that system is formed, we shall, before we take our leave, say a few words on the sources from which they have been drawn. To the various writers on education, we certainly owe much; for, although they have seldom been acquainted with the *theory* of public education, or those general principles of instruction and government, which may be deduced from a practical acquaintance with great numbers of young people; yet they have treated largely on the end, and objects to be pursued. If they have not at all times pointed out the road to perfection, they have often cleared up doubts as to the

direction in which it is to be sought. Among those of our own day whose exertions claim our thanks, a high rank is due to the late Mr. Edgeworth and to his daughter. To say nothing of Miss Edgeworth's share in the work, especially devoted to the science of education, we have drawn much information, and have been stimulated to very important inquiries, by the principles scattered through her Tales and Novels ; principles which we always hasten to lay before our pupils, gratefully acknowledging the benefit which enables us to instil them without labour, and so much more effectually than we could have done by any exertions of our own.

If the Greeks paid divine honours to the man who brought down wisdom from the gods to dwell amongst men, surely some reward is due to her, by whose labours the important science of education has been rendered apprehensible, even to children. She has a reward —the most valuable to the virtuous—that of beholding the benefit of her exertions,—of feeling that the great gift of existence has not been bestowed upon her in vain.*

* A predilection for the science and practice of education seems to be hereditary among the Edgeworths. The present head of the family has founded a large school, to the conduct of which he most benevolently devotes his time and talents,

Respecting the *mechanism* of our School, it might be supposed that we have many obligations to acknowledge; but upon a careful review of the case, we do not find that we owe to others much more than the traditional information which has been afloat in schools, perhaps for ages: this we have systematized to suit our own particular views. We know it is the fashion to assign many of these plans to Dr. Bell and to Mr. Lancaster, and very naturally, indeed we had almost said very properly; for society is perhaps more benefited by the promulgator than by the inventor of an improvement. That these gentlemen have done much we cheerfully admit; but it has been rather by arranging elements into a system, than by discovering those elements. We are hardly aware of having drawn a single improvement from their plans, although we act in concurrence with them in many parts of our system. In many parts we differ from them; but not so much from variance of opinion, as from dissimilarity of object. Their object, and

with a degree of zeal and assiduity which might afford an example to many teachers, whose industry must be stimulated by motives from which this gentleman can derive no part of his energy. We hope to draw very important advantages from the opportunity which we have lately enjoyed of inspecting his establishment—July, 1821.

an excellent one it is, must be to furnish the children of the lower classes with such information as is strictly necessary at the smallest possible cost. With us, cost is an object of minor importance. Neither should we do our duty, by resting satisfied with communicating the mere elements.

In order to avoid expense, the National and Lancasterian Schools are taught by the boys themselves, the master being rather a governor than a teacher. This part of the system is admirably adapted to answer its purpose: but it has essential defects, which render it unfit for general adoption.

As the process of instruction is carried forward by boys, it becomes necessary to mark out the duties of the teacher, with as much minuteness as those of the learner. Indeed, the duties of each must be made perfectly mechanical. There must be no doubt or hesitation on the part of the master or pupil; for doubt would produce delay and dispute, and consequently throw the whole machine into disorder. Hence there can be no appeal to the reasoning powers; for reasoning never can be reduced to mechanism. From the necessity which exists that all the boys should move exactly together, individual ardour is as much to be discouraged as individual inertness.

Every boy must conform to the average motion of the School. In short, the system has all the excellencies and all the defects of military discipline. It produces habits of attention, order, and subordination; most valuable qualities to the class of society whose interests it has in view. But it is our object to produce voluntary mental exertion; and we therefore cannot think it judicious to subject our pupils to continual restraint. We wish to teach them to educate themselves, while we direct their operations. We must teach them to *think* as well as act; while all that is attempted in favour of the others is to teach them the latter power. In learning elements only, the evils of mere practice will hardly be felt; but when the pupil ventures beyond them, he ought to be prepared with the habit of reasoning. We would not be supposed to make these observations with a wish to depreciate the value of a system, admirably calculated to answer its end; far from it; we wish to show, that, having a different end in view ourselves, we should not have been justified in adopting it. We are not only called upon to put the key of knowledge into the hands of our pupils; we must open the cabinet and display its treasures.

CHAP. IV.

ON THE BEST METHOD OF ACQUIRING LANGUAGES.

How many years of life are spent in learning Latin! How much labour, pain, and imprisonment, are endured by the boy!—how much anxious drudgery by the master!—how much disgust of literature is engendered!—how many habits are formed of reluctance to regular employment!—in short, how much misery has been produced, is being produced, and will continue to be produced, in teaching the Latin language? This appears to us to be a very important question, and will, we think, appear so to our readers, after a little consideration.

We sometimes figure to ourselves an inhabitant of another world coming among us, and examining with an unprejudiced eye the *value* of our pursuits. If this idle speculation could be realized, who, we should be glad to know, would be Quixotic enough to undertake a defence of the usual course of instruction in Latin? Nobody, certainly. For, in the first place, not two boys out of three who follow it,

ever become able to read even the easier classic authors with fluency. Of these, perhaps, one half, from the painful associations which they have attached to Latin books, never open one after they leave school.* If we add to the account, as Rousseau would, the numbers who die during the schoolboy age, we shall find the list of those who use the knowledge, gained with so much pain to scholar and to master, dwindle into a very small one.

This view of the present state of *scholastic affairs* will afford an apology for our presumption in proposing an alteration. Where plans are good, it may be dangerous to disturb them, even in the possibility of establishing better; but where they are positively and radically bad, the chances of injury are lessened, while those of benefit are increased.

Our attention was first called to the subject by observing, that in the Welsh towns which are frequented by the English, the inhabitants, even the children, speak both languages with fluency; yet Welsh and English are nearly,

* Lord Byron tells us, in his *Childe Harold*, that he cannot read Horace now, because he was made to read him at school. If Lord Byron, a scholar and a poet, is so harassed by unfortunate associations, as to receive no enjoyment from Horace, we need not wonder at the number of musty Latin books on the shelves of grown persons.

if not quite, as dissimilar as English and Latin. Perhaps when we consider the number of derivatives from the Latin language which we have in our own, we may pronounce the difference to be greater.

To estimate rightly the attainment made thus casually, and without grammatical instruction, the reader must recollect how much more difficult it is to speak than simply to read a language. In order, therefore, to make a fair comparison between the two methods, we should compare the Welsh children, not with schoolboys, but with those very few learned men, who, after years of labour, at last acquire a power of speaking Latin with tolerable fluency.

The superiority of the *natural* method (so to speak) of learning languages, is, however, practically acknowledged; for it is, as our readers well know, very common to send students into foreign countries, for the sole purpose of acquiring the languages there spoken; and we never heard of the experiment failing, however small may have been the student's natural capacity for the employment. *

* Mr. Edgeworth relates, in his memoirs, a curious anecdote of his eldest son, then a boy, about nine years old, strongly illustrating the advantages of the natural method, though Mr.

All this, it will be allowed, is very true, and yet we shall be asked, how it applies to the teaching of a dead language. We are well aware that Latin cannot be taught in the way in which we learn our mother tongue; but we are also aware, that masters might imitate nature rather more than they do, with great profit to their pupils and great ease to themselves.

It is usual to attribute the extreme facility with which languages are acquired by a residence in the countries where they are spoken, partly to the necessity which the pupil feels for study, and partly to his daily opportunities of hearing the language used by persons who thoroughly understand it. Stimulus to exertion, then, and good models, are the ad-

E. himself, seems not to have been aware of the principles, which the circumstance developed. They were in France, and the boy's tutor, says the father, "had a French master, to whom he dedicated at least two hours every day. My son was invited, and tempted by various means to partake of the lessons to which his tutor so assiduously attended; but the boy could never be induced to get by rote the French irregular verbs, or to hear critical remarks on the uses of certain common particles, which strangers are apt to confound and misapply. But, in the mean time, he learnt to speak French fluently, and with good accent; and before his tutor could express his wants at dinner with common accuracy, or indeed before he became intelligible to the people with whom he lived, my son was able to read and converse without hesitation."—*Mem. of R. L. Edgeworth, Esq., vol.* i. *p.* 275.

vantages of this mode of instruction, and they are great ones; but can they not be supplied, at least in a very considerable degree, in other situations?

Of the motives to improvement we have already treated at length;* and we have shown that no insurmountable obstacle exists, to their all being brought to bear upon the subject of our present examination. We have next to consider how far we can supply good models, or examples; and here we must confess we have a greater difficulty to overcome.

When the foreign student makes it understood by signs that he is in want, for instance, of a glass of water, and is told how he ought to express himself in the language of the country, the pleasure which he feels in his acquisition, and the vivid associations which are produced in his mind by the reality of the transaction, assist in fixing the lesson in his memory.

The nearest approach that we can make towards placing our pupils in the situation of the foreigner is, to engage them in committing to memory the dramas of the language which they are studying; and this we do: but we are aware that representative con-

* Chap. III.

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versation does not come home to the feelings, like that which spontaneously arises from the real business of life. Because the circumstances, habits, manners, and modes of thinking, of the dramatist, not being those of the student, they cannot present such vivid images to the mind, and of course cannot produce associations of equal force and duration; neither is the language so committed to memory furnished at the precise moment when its want is felt.

None but the experienced instructor can properly estimate the value of creating a wish for information before he supplies it. There is a hunger of the mind as well as of the body, and it is equally necessary to render the mental aliment either palatable or nutritious.

But with all these drawbacks, the acting of plays is a most valuable means of acquiring languages. Even shadows affect the mind, to a certain degree, and consequently strengthen the links of association; besides, many of the objects which are spoken of in the dramatic dialogue, as armour, weapons, chains, dresses, &c., can be brought upon the stage. Many of the actions represented as taking place can be really performed. Characters are completely separated in the minds of the pupils, by being assumed by distinct persons. Motive is given for

many rehearsals; by which not only the words are fixed in the memory, but the allusions are gradually discerned and made familiar to the learner. Actors, it has been said, are the best of commentators; and the master will find, that an obscure passage is often cleared to his satisfaction, while teaching the inflections of the voice, and the gesture of the body, requisite for its due effect upon the audience. So that although this exercise has not all the power of actual conversation, it is very much superior to a drawling repetition lesson, in which the pupil stammers out his half-learnt words, without affixing to them any ideas, without feeling interest in them, and consequently without a chance of preserving them in his recollection.

The ease with which ideas are retained in the memory, when associated with objects of sense, is well known, and has often been pointed out. The recurrence of sounds which are connected with any event often recals the circumstances of it strongly to the mind. A return to the scenes of early youth will awaken recollections which have lain dormant for years; and, with some persons, perfumes, and even objects of taste, have the same power. This great law of our nature has hardly met with due attention in the business of educa-

tion; it forms, however, the foundation of almost all schemes of artificial memory, and is the secret by which so many wonders have been wrought.

The magical effects of artificial memory have induced us at various times to try if some one of the many plans before the world might not be serviceable in our own school; but hitherto our attempts have not been successful.* The great defect in all the schemes which have come under our notice, is, that the image which the pupil is directed to attach to the words of his lesson is not that naturally raised by them. Thus we recollect, in a work purporting to be a detail of the system of Professor Feinagle, directions are given for learning Goldsmith's *Hermit*, which begins—

"Turn, gentle Hermit of the Dale."

First, the pupil is told to conceive of a large tower, like the Tower of Babel, with a winding ascent on the outside; then to suppose a hermit standing upon the top of it, "turning with inconceivable rapidity!"

That it is possible by such a process to commit any number of words to memory, we do not at all doubt. We are equally willing to

* Grey's "Memoria Technica" is an exception, but its utility is confined to numbers.

admit that the pupil "will as readily repeat them backwards as forwards;" nay, we go farther, for we think that for all purposes of either pleasure or profit, the backward repetition will be quite as eligible as the forward.

The fact is, that these false images entirely drive the true ones out of the mind; so that, unless it is useful to know mere idle words without any real signification, nothing is learned by this process. Yet after all, it may be doubted whether the topical system, or that of associating ideas with places, may not be useful, when the subject itself is not necessarily connected with imagery of its own. On this latter question we speak with diffidence, because our course of experiments is not completed; but of the impolicy of substituting false imagery for true, we have a more confident opinion.

We have wandered thus far from our subject, in order to show, even by these (as we conceive) mistaken systems, the power of sensible ideas on the mind. The lesson which we have drawn from a consideration of the different plans of artificial memory, that have at various times come under view, is, that although it is not politic to load the minds of children with false imagery, it is highly important for them never to commit a passage to memory, or

if possible, even to read it, without gaining an accurate conception of its real and natural associations.

With this view, we strongly recommend instructors to supply themselves, when teaching the classics, with ancient maps and plans, and with plates or drawings of ships, temples, houses, altars, domestic and sacred utensils, robes, and of every object of which they are likely to read. A classical garden, too, or a collection of plants and shrubs mentioned by the poets, would be a desirable accession to a school; nor would a collection of models of ancient warlike machinery be less useful.

It is impossible to calculate the injury which the minds of children suffer from the habit of receiving imperfect ideas. It gradually weakens, and in some instances destroys, the powers, both of reasoning and imagination: the reasoning powers—because reasoning is the act of comparing ideas with ideas, which must evidently stop for want of materials, if those ideas are so shadowy as not to have "a local habitation and a name" in the pupil's mind: the powers of imagination—because imagination is the act of forming ideas into new combinations, which is equally impossible, unless they have distinct shapes and definite forms.

To return to our imitation of the method by which a foreigner learns languages. We have attempted to show, that the two great advantages of stimulus, and the opportunity of imitating good models, which are so much insisted upon in the case of foreigners, may, to a certain extent, be enjoyed at home; but there is another advantage, rarely adverted to, which requires a very careful consideration.

A child and a foreigner learn synthetically: they are told, for instance, that a certain building which they inhabit is called a house; this fact is, by association, firmly fixed in their minds; the child considers it a proper name, (for with children all names are at first proper) and so would the foreigner, if he had not already learnt how to generalize in his own language: he is, however, aware that it is generic, and uses it according to the analogy to which he has been accustomed; but he does not trouble himself with all the restrictions and extensions of the genus;—he does not, for instance, learn on the same day, and at the same time, that certain houses are called cottages, and certain others palaces; nor is he reminded, that a family, a commercial establishment, and sometimes a council of legislators, are called a house; but the idea is left to settle itself in his memory,

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before it receives these little modifications; and when he finds that the word house has another meaning, he at the same time has some new association given to him, which fixes the subsidiary fact as firmly in his memory as the first. The child is obliged to learn altogether thus; but the foreigner may turn to his dictionary, and find all the meanings of the word; and as he does not do this until he has felt the want of the information of which he is in search, he seizes it with eagerness, and preserves it without difficulty. It is the same with the inflexions of words. A foreigner (and indeed a child, after he has begun to generalize) will inflect all his words regularly; but, when he has made a few mistakes, he will thank you for a grammar, and esteem a complete list of exceptions a great prize.*

This appears to us to be the natural way of

* The intelligent instructor must often have observed, in teaching a boy the rules and exceptions of a grammar, that he learns to consider both as of equal importance to be remembered; or perhaps, indeed, the exceptions, as they occupy the largest space in the book, will have the superiority: in learning from practice, (and using the grammar only as a book of reference) as he must meet with many more words following the rule than deviating from it, the proper order of importance is preserved. In the list of exceptions, we often find words, which a student might have read the classic authors for years without meeting with: surely a knowledge of them, and their inflexions, ought not to be put on a level in his mind with that of a general rule.

learning; and we think, that if our readers carefully retrace the history of their own minds, they will find that the greater part of knowledge is gained in the same manner; that is, by learning particulars, and then arranging those particulars into classes; for we find, that even those who begin to teach by means of rules, always add an example, which (as far as our own experience goes) is more depended upon for conveying ideas than the rule itself.

Thus the principle of what we contend for is conceded, and all the difference between the system which we advocate, and that in common use, is, that we would store the mind of the learner with many examples, before we call upon him to classify them, and deduce from them rules and general principles.

The disposition to generalize soon arises in the mind; and if the teacher were careful not to give his pupil a rule, until he was sure that the boy must have felt the want of one, it would be eagerly acquired, and readily apprehended; nor would he have so often to reproach his pupil with the faultiness of his memory.

Rules and definitions are useful, rather for correcting acquirements, than for making them originally.

No one, we presume, who had never heard

of a straight line, would be much edified by the definition of Archimedes, that it is the shortest which can be drawn between two points; nor do we think that any judicious teacher would give such an enigmatic answer to an inquiring child. He would show him *examples* of straight lines; first, perhaps, he would draw one upon paper; then he would point out the edges of the furniture, leading him to generalize his ideas for himself, and to deduce the abstract notion from the variety of modes, in which the concrete appears. After a time, when the child knew perfectly well what a straight line was, this definition might be given him, as furnishing a means by which he might try whether a line which appeared to be straight was so in reality.

Our first care, then, should be to store the minds of our pupils with individual facts; when that is done, the desire for arranging them into classes, and deducing from them general rules, will arise of itself, and may be turned to great account in perfecting and refining the knowledge previously acquired.

We have already seen how the *facts* of language are acquired by the foreign student, and we have recommended one means (the performance of dramas) by which the advantages enjoyed by the foreigner, may be, to some

extent, participated in by the schoolboy; but it is evident, that the power of acting dramas presupposes some knowledge of the language in which they are written. Now this previosu knowledge is in no way so readily gained, as by the use of translations, which present the student with a dictionary of both words and phrases, arranged in the order in which he wants them. The very facility, however, which translations afford, has made them enemies. It has been supposed by many writers, that they make boys lazy, give them superficial knowledge, encourage a disposition for depending upon extraneous assistance, and, by withdrawing all difficulties, produce but a transitory impression on the memory.* These are serious charges, and, if they could be proved, would effectually prevent translations from being used by any honest teacher; but have they not been allowed without sufficient examination?

As to the charge of producing indolent habits—it is easily answered. We teach by the process of *construing*, and therefore, even with the translation before him, the scholar will have a task to perform, in matching the English word by word with the language which

* Knox, Barrow, Burton, Goldsmith, Edgeworth, Valpy, Joyce, Carpenter, Shepherd.

he is learning; nor will he find either dictionary or grammar unnecessary to him, as he will often have to change the words of the translation for others more literal. The teacher will thus have an opportunity of exciting a desire to consult the dictionary and the grammar, by making his pupils feel their utility.

Grammar, as a science, ought to be taught with reference to that language which the student best understands; because it is the art of arranging particular facts into rules, as general, and as free from exceptions, as the irregularities of language will permit; and therefore, if our previous reasoning has been correct, it ought not to be studied until these facts, or at least a great number of them, are in the mind. But the science of grammar being once well understood by the pupil, he may and will apply his knowledge, so as to be soon able to consult the grammar-book of any language with pleasure and profit. Neither do we disapprove of the pupil's learning by heart all the paradigms which are models to a great number of instances; but, even in this case, we would rather he should have felt the want of such a general rule, before he is supplied with it.

Our readers must be apprised, that we have here laid down the points to which we are

gradually tending, rather than those which we have yet reached. We must confess, that, however strong are our convictions, we leave the beaten path with hesitation, always reflecting on the heavy responsibility under which we aberrate from the received modes of education. We have, however, for a long time been gradually approximating our practice to this theory, and always with success. We have, too, the highest authority and precedent for our encouragement.

Locke advises the teacher who cannot speak the language with his pupil, (he is giving directions for private instruction) "to take some easy and pleasant book, such as Æsop's fables, and write the English translation, made as literal as may be, in one line, and the Latin words which answer each of them just over it, in another. These let him read every day over and over again, till he perfectly understands the Latin, and then go on to another fable, till he be also perfect in that, not omitting what he is already perfect in, but sometimes reviewing that, to keep it in his memory. And when he comes to write, let these be set him for copies; which, with the exercise of his hand, will also advance him in Latin. This being a more imperfect way than talking Latin unto him, the formations of the verbs first, and

afterwards the declensions of nouns and pronouns, perfectly learned by heart, may facilitate his acquaintance with the Latin tongue.

More than this of grammar I think he need not have, till he can read *Sanctii Minerva* with Scioppius and Perizonius's notes." *

Queen Elizabeth, of whose learning we have such ample evidence, "never took (says her tutor, Ascham,) yet Greek nor Latin grammar in her hand, after the first declining of a noun or a verb."†

The children, Baratier, Chateaubriant, and Heinecker, whose early knowledge of languages excited the astonishment of even the learned, were none of them indebted for their extraordinary attainments to the rules of grammar.

If a modern authority is required, we may take that of Pestalozzi, whose system of education is exciting so much attention throughout Europe.

"On doit étudier une langue comme un *art pratique*, et non comme une science. De même que l'art pratique est antérieur aux théories, que la matière existe avant l'ouvrage, et l'objet

* Education, sec. 167.

† Schoolmaster, book ii. "This work (says Dr. Johnson) perhaps contains the best advice ever given for the study of languages."—*Life of Ascham.*

avant la copie ou la représentation de l'objet: de même aussi, l'art de parler existe et doit être appris avant la science de la langue. Au lieu de chercher à composer une langue à l'aide des règles, il faut l'apprendre en détail et s'élever successivement du particulier au général. Par la méthode pratique on obtient facilement les résultats que la régle a en vue mais qu'elle ne peut donner." *

Another of the charges against the use of translations is, that they encourage a taste for extraneous assistance. But must not that be inevitably the case in all study of *facts?* Can any mode be devised by which the pupil shall *reason* himself into the knowledge of language? If all methods of acquiring languages are dependent upon authorities, surely that which presents the readiest means of applying to those authorities must be the best. But it would be just as reasonable to say that a student, who had learnt Latin by the aid of translations, would always stand in need of them, as to maintain that a child would throughout his life require to be prompted by his nurse, because she had originally taught him to speak, by imitating the sounds which she uttered. There is no reason, however,

* Esprit de la Methode d'Education de Pestalozzi. Par Jullien, tome ii. p. 49.

that a translation should be used after the pupil has acquired a sufficient knowledge of the language to read it with some degree of fluency: whenever the pupil is able to gather the general meaning of a passage without the aid of his grammar-book and dictionary, he ought to lay aside the translation, because then he will not have to expend much time in recurring to those books; and when he does open them, he will know pretty exactly what is the object of his search.

Great stress is laid by some authors on the strong impressions produced on the mind by difficulties; and it is true, that a relation does exist between the force of an impression, and its effects on the memory; but there are some other consequences of great difficulties, which also have to be taken into consideration. In the first place, in order to produce the good effect which is ascribed to them, they must be overcome by the pupil himself; and, if they are above his strength, how is that to be accomplished? Is there not some danger, (and is it not true in point of fact,) that in the ordinary method many difficulties are not surmounted? Are they not, after keeping the pupil in idleness, and in a frame of mind the most unfavourable to improvement, evaded by surreptitious help? Of the ill

consequences of such aid we have heretofore expressed ourselves at length.*

Again, as far as our experience goes, moderate efforts, often repeated, avail more in education, than violent exertions which must of necessity be less frequent, and which cannot be produced without great and oftentimes dangerous stimulants. The objectors to translations always argue as if the task must necessarily be of the same length, whether the pupil be allowed a translation or not. This, as Mr. Clark justly observes, is a mere assumption.† There can be no reason why a greater quantity is not required from a boy when his facilities for accomplishing his task are increased; and we are inclined to think that a morning employed in easy, regular, labour, will be more productive, than the same time, partly consumed in painful researches, partly wasted in the indolence of despair, and

* Chap. III.

† See the Preface to Clark's editions of the school classics. This is the only valuable part of the books; for the baldness and vulgarity of the translations render them almost inadmissible. ex. gr.—*Ambages* he renders in one place *long-winded fetches*, and in another, *a cock-and-bull story!* We also dislike his plan of printing the translation on the same page with the text, as it offers the pupil a temptation to avail himself of its assistance at the time of going through his task.

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partly spent in cajoling his more advanced schoolfellows for assistance.

The opponents of what we call the natural method of teaching language, have another argument on which they greatly rely. Latin and Greek, say they, are not acquired so much for their utility in after-life, as for the advantage which the mental faculties receive in studying them; the employment they furnish to the memory, the scope they offer to the invention, and the exercise they give to the reasoning powers. With respect to the memory, we have the advantage, for we appeal to it more than our opponents; at least, in the early stages. With respect to invention and reason, we think it better to begin by employing them on subjects which are more exclusively their province. One of the first exercises of the power of reasoning consists in tracing analogies. A child is soon aware that there is an agreement between *ask* and *asked*, and *love* and *loved*. Having ascertained this agreement, he then, by the power of invention, which proceeds at first in the same track, applies his knowledge to the inflection of some other verb with which he is acquainted: if he be fortunate enough to meet with one of regular formation, he is confirmed in the truth of his deductions, and has learnt an important lesson; but if he

meet with an irrregular verb, and learn that in saying *telled* instead of *told* he is *doing wrong*, how is he to know the fact, that the rule of logic, by which he made the deduction, is not erroneous, but that mankind have not been equally philosophical with himself?

Thus, it is clear that every child, even in learning to speak its native tongue, must lose its confidence in the exercise of two of the noblest faculties of man,—reason and invention.

How are the courage and enterprise (if we may so express ourselves) of these powers to be restored? By following a similar course of proceeding to that which produced the injury, or by engaging them in pure science, where all the rules are without exceptions, and where the mind may be accustomed to long chains of deduction?

We are of opinion that the mathematics are the best field for the exercise of these powers; that it is to arithmetic, geometry, and algebra, (which may be studied at a much earlier age than is usually imagined,) that we ought to look for the education of reason and invention. Not that we are unwilling to grant, that to these powers *in their strength*, there is much room for exertion in studying the philosophy of language, but, as we have before said, the

philosophy of a language can hardly be studied with advantage, until the student is acquainted with the facts of it.

Mathematical problems admit of such complete and undoubted answers; they are capable of such exact arrangement; and the solutions of them so certainly follow a due investigation, that is to say, toil and success are so nearly in proportion to each other, that the student forms insensibly the habit of patient labour: but in studying the classic authors, the pupil has no gradation of difficulties, or at best a very imperfect one; nor does he know, when he encounters a hard passage, whether it is capable of a satisfactory answer, or whether it is a subject of contention among scholiasts and commentators. The unavoidable consequence of this uncertainty is to disincline him for putting forth his strength; for it is in the very nature of man to mete out exertion by the probability of success: hence we are of opinion, that an early pursuit of exact science would be extremely useful, with a view to acquiring habits, which, though they are rarely formed in classic studies, are of no slight value in them.

There only remains to consider that state of the pupil's progress in language, in which he reads it with tolerable fluency, and in which

he has committed much of it to memory. He will then be in possession of a *copia verborum*, and of that *tact* by which he appreciates idiom: this must now be improved, and raised in some degree into a science, by a classification of the analogies and differences which it detects. In our opinion, the best method of effecting this purpose is that recommended by Crassus, by Cicero, and by Pliny the younger, among the ancients; and practised with so much success by Roger Ascham among the moderns;—the method of double translations. The advantage of this method is, that the learner first gains a general feeling of the style of his author, by translating him into his native tongue, which lessens the difficulty of the re-translation, and he is furnished with a model, with which he may compare his own efforts.

We do not hope to convince all, or even many, of the advocates of the received system, that our plan is more eligible than theirs;—we shall be satisfied, if they perceive that we have not adopted ours through love of ease, but from a sincere conviction of its accordance with the principles of the human mind.

We have lately met with a "French English Grammar by N. G. Dufief, Paris, 1817," which, we believe, has been reprinted in England, under the title of "Nature Displayed in her Mode of Teaching Languages." The method which M. Dufief has adopted is to give the student a great number of phrases to learn by heart, intermixing a few grammatical rules and observations. This is a book of considerable merit, and the author has some very correct ideas on the proper use of grammar. "Grammarians," says he, "have continually confounded *grammar* with *language*, and *vice versâ*. This strange perversion of ideas has been the cause of their ill success all over the world. Instead of boasting of teaching language by grammar, (which was, in fact, placing the cart before the horse,) they should have said they taught grammar by language."—*Introduction, p.* 23.

"The rules of grammar, or the particular principles of a language, are only a collection of observations upon custom. It follows hence, that the knowledge of custom, or of a language, which is the same thing, ought to precede the knowledge of rules, for otherwise those rules must stand only for observations upon nothing at all!"—*P.* 34.

"The preceding remarks will probably induce many to ask, 'What are grammars good for, since they are useless to the acquisition of language?' Happy to join in opinion with the great Locke, and Condillac, I reply, that grammatical information will be found useful principally to those, who, being already acquainted with a language sufficiently for the general purposes of society, are still desirous of obtaining a more critical knowledge of it."—*P.* 36.

These observations prove that M. Dufief has shaken off the fetters of the old system; and so far he has done well. We agree with him too in the importance which he attaches to phraseology, though not exactly for the reasons he assigns. "The reason," says he, "of teaching a language by phrases, and not by single words, is obvious; the name of a thing merely recals the object to the mind, but it can neither express an action performed by it, nor convey an idea relative to it. A word, therefore, that expresses no thought or action has no force by itself, and only serves as a link in the chain that makes up a phrase or complete sense."—*P.* 23.

This is not very conclusive. It appears to us, that the main reason why unconnected words are not remembered well is because the

ideas are too abstract. Suppose the reader saw these words, "*un—le—couché—à—etait—lynx—arbre—un—de—pied*," what precise meanings could he possibly attach to them? we do not mean in conjunction, for they can have no union, but separately. We pass over the connectives, of which it is hardly possible to form any idea, when they stand alone. We say nothing indeed of any words but the substantives, which happen to be all the names of natural objects; but is not the reader at once aware that even these words, which are the most independent of combination, supply but very faint ideas to his mind? Once, however, reduce the chaos to order, and a wonderful effect will be produced. "*Un lynx etait couché au pied d'un arbre.*" Here, instead of a *lynx* moving, standing still, or attacking his prey, as the mind chose to wander over the moods which the idea is capable of taking, it is tied down to one—"*couché au pied d'un arbre.*" It is the same with the other words; the mind could not make to itself any definite picture of the idea conveyed by the word *pied*, because it did not know whether it was the foot of a man, a dog, a bird, a mountain, a page, a deed, a table, &c. &c. ad infinitum. Now when it is known to be the foot of a tree, the whole phrase becomes a picture, in describing

which every word has some definite office; and this, by a well-known law of the human mind, is necessary both to create interest and to secure remembrance. Association also brings its magical power to bear upon the memory: no wonder then, with all these helps, that words in phrases are better remembered than when they stand alone. Another reason why an acquaintance with unconnected words, even if it afforded precise ideas to the mind, would not supply the place of a knowledge of phrases is, that the great difficulty of a language consists not so much in the acquisition of its words as in their due arrangement in such order as may conform to what is called its *genius*.

But why stop at phrases? All the arguments in favour of teaching phrases go to prove that we should proceed to sentences, and from them to whole pieces. To proceed with the fable from which we have quoted, "*il aigusait ses dents.*" Here we have another touch to the picture; our ideas are become more exact; the mind, by being kept longer on the object, has contracted an acquaintance with it of great importance to the memory, and thus the ties of association are drawn more closely about it.

The author's reasons against extending the

principle do not appear to us to carry any weight. "There is no necessity," says he, "for beginning to read authors very early, for by learning the vocabularies in the manner we have proposed, we learn the three things which constitute the knowledge of a language; to understand, speak, read or write it. Application to books suited to the taste of a pupil will divide his attention, which should be wholly devoted to committing to memory the practical part, and from the trouble in learning the phrases, especially in the beginning, will create a distaste to them. Merely to read good writers is a very circuitous, ineffectual, and faulty method of learning a language, unless supported by such a method as we recommend; for supposing the learner already acquainted with pronunciation, the same word must occur in books a great many times, before it can be retained in the mind for the ready purposes of conversation. The reason of this is obvious; the words expressing the ideas of the writer are not presented phrase by phrase in an analytical manner, as they are in the practical part of the following work, but *en masse*, occurring only by hazard amidst those necessary for expressing the ideas of the author, whose design in writing was not to teach a language. Hence it hap-

pens, that being directed to many words at once, the attention is so weakly fixed on each of them, that the mind cannot remember any particular one, unless it have been presented many times."—*Introduction, p.* 27.

M. Dufief, we see, complains that the perusal of books suited to the taste of the pupil is a more pleasant occupation than committing his phrases to memory, and therefore wishes that the pupil's attention should not be divided by having these books put into his hands. In the very statement of the case, M. Dufief admits his plan to labour under a disadvantage, —*the inclination of the pupil is against him.* But this fact would be very difficult to account for, if it were true that in reading books, "the attention, by being directed to so many words at once, is so weakly fixed on each of them, that the mind cannot remember any particular one, unless it have been presented many times," because the same indistinctness which obstructs improvement would preclude entertainment. No state of mind is less allied to pleasure than distraction and uncertainty. We should like to know also why the mind is to be directed to many words *at once*; it can seldom be necessary, at least in the French language, to direct the attention to more than a phrase at a time, and, if that is too great

an effort, what becomes of M. Dufief's own system? With respect to the necessity for reiteration, which M. Dufief insists upon, does he forget, that in reading a book the same word *is* presented to the mind of the student many times? It is true, if he have to search for it in the dictionary, much time must be expended, but we would give him a translation, until the number of words of which he was ignorant was comparatively small. M. Dufief also overlooks this great advantage, that the words are reiterated, and therefore learnt, in the order of importance. Those of which the pupil will have greatest need will be most frequently offered to his attention. Neither ought it to be forgotten, that although the words are repeated very often, they do not occur always in the same sense: every time they may take a new shade of meaning: we must always bear in mind that they have a very chameleon-like property; they must be seen many times, and in many lights, before we are acquainted with all their hues. It is only thus that we can "attain the whole extension of language, distinguish all the delicacies of phrases, and all the colours of words."*

The knowledge of the literature of a lan-

* Johnson.

guage is, in our eyes, a matter of more importance than it seems to be to M. Dufief. In the study of the learned languages, almost the sole end is to give the pupil a more complete possession of classic literature than he could possibly gain by merely reading translations; and, in our opinion, it is no small advantage of the plan which we have adopted, that it enables him to attain the great object of his toil at an early age, when all that he reads remains with him for life. We regret that the mere words of the exercise-books occupy any place in our memory, which might have been filled by the rich matter of antiquity.

In the living languages, it is true, literature is not every thing; the student must learn to speak as well as to read; but it does not follow that, because insulated phrases are not learnt by rote, the memory should remain entirely without exercise. Let the teacher avail himself of the drama. We need not repeat at length our reasons for believing that much time will be well spent on compositions in the dramatic form; we shall, however, just observe that, in such an employment of his time, the master will enjoy the willing co-operation of his pupil,—no slight advantage in any branch of education, but more especially valuable in appeals to the memory. No habit

is more effectual in preserving the recollection of what has been learnt, than those involuntary mental repetitions, which we so often make of passages from which we receive pleasure. But no one ever fed his mind upon lists of phrases, or awoke from a reverie where he had "forgot himself to marble," in ruminating on the beauties of the exercise-book.

We speak from experience, when we say that pronunciation is learnt with much more care and anxiety by this plan than by any other. The pupil has an ulterior object for his exertions to fix upon. It is not sufficient that he pronounce well enough to go through his lesson; he must be understood by his auditory, and pass the ordeal of their criticism. Nor must it be forgotten, that this motive operates on the teacher. In so arduous a task as that of instruction, it is of no mean importance to furnish occasionally a little stimulus to the master as well as the scholar. There are temptations enow to indolence on both sides.

We begin with dialogues upon familiar topics, thence rising to scenes from standard authors. For obvious reasons, we seldom take whole plays, especially in the French language.

We have hitherto omitted to say much re-

specting one of our methods of teaching language, which has been for some time gaining ground with us. We allude to the practice of extemporaneous construing, which now employs several hours of the day. A class opens at a passage with which the pupils are unacquainted, and they attempt to construe it, the master assisting them in their difficulties; not confining himself to the mere translation of obscure phrases, but intermingling explanations, and also such information as boys ought to find in the notes to their school-books, but which, as far as our experience goes, is seldom to be met with. This exercise is become the great staple of the school, but the boys have still daily lessons to prepare; sometimes, in the lower forms, with the assistance of translations: in these lessons the most perfect accuracy is expected; so that no careless or slovenly habits of learning can well be contracted, nor do we find that they are.

We have been delighted to discover a great resemblance between our method of extemporaneous construing, and that practised in teaching Latin, when it was the literary language of Europe. There is an interesting dissertation on the subject of teaching language in the *Encyclopédie, art. Etudes.* The writer

cites *Le Febvre, Fleury, Rollin,** *Du Marsais*, and *Pluche*, as authorities in favour of the plan of *explication*, by which we understand construing, or translating with the assistance of a master, who supplies the unknown words as they arise. *Le Febvre*, the father of *Madame Dacier*, had a son of great promise, who seems, as well as his sister, to have been taught altogether by this process, which was commenced when he was ten years of age. The boy died at fourteen, but even then he was able, says his father, "to read fluently the most difficult authors, both Latin and Greek." The writer goes on to speak of the antiquity of this method.

"Aussi la methode qu'indiquent ces savans étoit proprement la seule usitée pour apprendre le Latin, lorsque cette langue étoit si répandu en Europe qu'elle y étoit presque vulgaire; au temps par exemple de Charlemagne et de S. Louis. Que faisoit on pour lors autre chose que lire ou expliquer les auteurs? N'est ce pas de là qu'est venu le mot de *lecteur* pour dire

* It is but common candour to admit, that *Rollin* (vide *Manière d'étudier les belles lettres, tome* i. *p.* 15,) would begin by grammar, but then he would confine it to a knowledge of declensions and conjugations, and a few plain rules. To the works of *Du Marsais, Fleury, Le Febvre*, and *Pluche*, we have not access.

professeur? et n'est ce pas enfin ce qu'il faut entendre par le *prælectio* des anciens Latinistes? Terme qu'ils employent perpétuellement pour designer le principal exercise de leurs écoles, et qui ne peut signifier autre chose que l'explication des livres classiques.—Voyez les colloques d'Erasme.

"D'Ailleurs il n'y avoit anciennement que cette voie pour devenir Latiniste; les dictionnaires Français-Latins n'ont pas paru que depuis environ deux cent ans: avant ce temps là il n'était pas possible de faire ce qu'on appelle *un theme;* et il n'y avoit pas d'autre exercise de latinité que la lecture ou l'explication des auteurs. Ce fut pourtant comme dit M. le Febvre, ce fut ce methode si simple qui produisit les Budés, les Turnebes, les Scaligers. Ajoutons que ce fut ce methode que produisit Madame Dacier."

The plan of instruction by Condillac, in his education of the Prince of Parma, was very similar to that which we have followed:—"Jusqu' alors nous avions toujours fait ces sortes des lectures ensemble, et je ne lui avois pas laissé la fatigue et l'ennui de chercher dans un dictionnaire la signification des mots. Alors je le chargeai de se préparer seul à traduire quelques vers de Virgile. Il commença par l'Enéide qu'il trouva facile et dont

il traduisit les six premiers chants."—*Cours d'Etudes pour l'instruction du Prince de Parma.* —*Motif des Etudes.*

It is impossible for a teacher to read the following observations of this able writer too often. " S'il est utile de laisser à un enfant des difficultés à surmonter, il ne faut pas le dégoûter par des obstacles ou trop multipliés ou trop grands ; et toute l'attention doit être de proportionner les difficultés à ses forces et de ne lui en presenter jamais qu'une à la fois." —" Rien n'est plus inutile que de fatiguer un enfant en chargeant sa mémoire des règles d'une langue qu'il n'entend pas encore. Qu'importe en effet qu'il sache ses règles par cœur s'il ne lui est pas possible d'en faire l'application ?"—*Motif des Etudes.*

CHAP. V.

ON ELOCUTION.

It is by no means our intention to write a treatise on this subject; we have, however, a few observations to make, the result of experience, which may explain why a considerable portion of our time is occupied in the various exercises, which may be classed under the general head, Elocution.

It has never been disputed, we believe, that to read well is a desirable accomplishment. It is valuable for its own sake; but to the teacher it will assume a character of higher importance, when he reflects, how much that is useful a boy must have acquired before he can be said to be a good reader.

The groundwork of this acquirement, a quick perception of his author's meaning, is most easily and certainly gained by private reading; for the necessary slowness of good delivery, and the bodily effort required, are unfavourable to that rapid appreciation of the subject matter, which is the sole occupation of the silent reader. Good reading,

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then, presupposes literary taste; and the rank which it bestows in a school is in some measure a reward for those unobtrusive exertions, which are in danger of being forgotten, precisely for the reason why they ought to be most sedulously remembered,—because they give the master no trouble.

As private or silent reading is the best means of learning to translate the written language of the author into ideas, so reading aloud is the best, and indeed the only, means of learning to translate the written signs into oral words; and much practice of this kind is requisite to produce fluency. The master will of course take the opportunity afforded by oral reading to teach the standard pronunciation. A boy, however, may read very fluently, comprehend his author, and know the standard pronunciation perfectly, without reading well. Two great consituents of good reading remain to be acquired,—Enunciation and Inflection.

The enunciation and inflection of any language are, we conceive, best learnt by recitation. Where the words are well fixed in the memory, the pupil has only to attend to the delivery. Let him then be taught to recite a passage, until the slightest variation of either

enunciation or inflection between him and his teacher is imperceptible.

The first lesson ought to be to copy others; afterwards the pupil may invent his inflection for himself, or rather apply it; for, as the philosophical student well knows, the modes of inflection are but few, and a little practice will soon teach their application, when the power of producing them at will is once acquired. The sounds of a language are also very limited, and may all be comprised in a passage of moderate length. It is thus we teach the oral part of the French language. We have observed that, in mere reading, a pupil never learns to utter any sound perfectly. He is satisfied with a very gross approximation, and so must the master, if he wish the pupil to proceed; while, on the contrary, our plan renders it necessary for the boy to reiterate the passage almost *ad infinitum*; but then he learns to form all, or nearly all, the sounds of the language. It is true he is dependent on the particular collocation in which they have been placed, and although he can recite that particular passage perfectly, he will find difficulties in another, containing the same sounds differently arranged. He has, however, proceeded according to that fundamental rule in education, "One difficulty at a time," and has

gained a very important acquisition. He has a standard of perfection in his mind, by which he will measure all his future attempts; and much less exertion will be necessary to enable him to recite a second passage, than was requisite for the first. Thus he will gradually throw off his trammels, without lowering his excellence.

A young Spaniard, one of our pupils, who pronounced our language but imperfectly, once learnt, by a number of repetitions, to recite a piece of English verse with such accuracy, as to be mistaken for a native by persons who had not heard him converse.

If our principle be correct, it should follow that a student incurs some danger, who goes into a foreign country before he is master of the pronunciation of the language; because the daily necessity for speaking will render it necessary that he should make constant attempts, and the persons about him, eager to interpret his meaning, will not be so anxious, in all cases, to correct his errors as to supply his wants. It is true infants learn thus, but the organs in infancy are so extremely pliant, that they obey the slightest impulse of the will; and after all, there is much to condemn in the enunciation of a very large proportion of society.

We consider gesticulation an art which ought not to be neglected. To the public speaker, if we may believe the prince of orators, it is every thing; but even with humbler views, we think it of no mean importance. Condillac asks, "Whether any one could know a language, if the brain did not acquire habits answering to those of the ears to hear it, those of the lips to speak it, and those of the eyes to read it? The recollection of a language is not, therefore, solely in the habits of the brain, it is also in the habits of the organs of hearing, of speech, and of sight." If Condillac is right, to ensure memory we should engage the assistance of as many habits as possible. The habits of the organs of gesture, the hands, the feet, the muscles of the face, &c., may all be made to assist. The memory, even in youth, is sufficiently treacherous, and requires every possible guard. We have, therefore, considered an energetic delivery, accompanied by appropriate action, valuable assistants. We may add, that we find careful recitation the best method of infixing the quantities of Latin and Greek words in the recollections of our pupils. It is hardly necessary to insist on the utility of storing the memory with the style of the classic writers. It is impossible to conceive a better means of be-

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coming imbued with a taste for elegant literature, or of learning the tact, so necessary to enable the student to write the learned languages, with any chance of success. We hope it will be seen by the intelligent reader, that all our plans tend to give such a familiarity with the great models of style, as must put the scholar in possession of important advantages, when the age for original composition arrives.

The practice of elocution is intimately connected with the cure of impediments in the speech. Slight defects of utterance, as lisping, muttering, and the elision or substitution of certain sounds, yield to it almost immediately. Stammering is a more obstinate enemy, and is not subdued without much time and labour.

It has, we think, been clearly proved by Mr. Thelwall, that the disobedience of the organs to the will of the speaker, (which is the proximate cause of stammering,) proceeds from his neglect of the laws of rhythmus,—in other words, from his not speaking with due attention to measure or time. Be this, however, as it may, we have found in practice that cultivating the ear, with regard to the perception of time in speech, is an excellent means of restoring to the pupil a due control over his organs. But the mere perception of time and rhythmus is not enough, because the

exercise of the faculty may be thwarted; and it will be thwarted by every thing which disturbs the mind, and irritates the temper of the pupil. Health, employment, and order, will be, therefore, found to be very important auxiliaries in working the cure; and here, we think, we have some advantages.

Frequent opportunities for exercise in the open air with companions of his own age,—a system which regulates his actions without harshly coercing them,—the spectacle of a machine working its numerous parts without hurry or confusion;—these appear to us to be circumstances more than commonly favourable for placing the pupil in a state of body and mind to receive the lessons of the master with profit. We have also facilities for inducing the perception of time; the pupil is constantly witnessing the measured movements of others, and is trying to act in concert with them. To learn to march he finds indispensible to his comfort. The motive to exertion thus obtained, his daily practice, and the effect of example, soon overcome any natural inaptitude for making the acquisitions.

Every stammerer, the reader will have observed, can sing; at least the defect of stammering offers no bar to his being a singer, if he is in possession of the usual qualifications

of voice and ear. The ear, we are convinced from experience, may in almost all cases be educated to a sufficient degree of accuracy for our purpose, and the voice is a matter of little importance to us, as our pupil would not learn to sing with the view of exercising the art, but simply to qualify him for learning to speak.

In extreme cases, then, we would have the pupil taught to sing. From singing, let him pass to *recitative,* which so nearly approaches to speaking, that the Siennese, we are told, actually practice an intonation, which may be considered a species of it, in common conversation.

The next step is for the pupil, accompanied by his master, to march along the room, and repeat a few verses chosen for the simplicity of their rhythmus, the speakers marking the accented syllables by the tread of the foot. Afterwards verses of more difficulty may be adopted; then measured prose, as Barbauld's Hymns, Dodsley's Economy of Human Life, or (to go at once to the models from which these are imitated,) our translation of the Psalms, the Book of Job, and the Prophecies. From these we would proceed to extracts from didactic works, and, lastly, to narrative and dialogue.

In going through this course, the teacher gradually ceases to accompany his pupil, either in marching or speaking, until at length he directs the boy himself to stand still. Recitation may be sometimes changed for reading, and instead of the *sing-song* tone almost inseparable from the plan in its early stages, more natural inflections may be substituted. The pupil should now be taught to relieve his difficulty of utterance in conversation by forcible gestures, and by pronouncing his words with a measured cadence, marching also, or beating time, when he finds the impediment cannot be surmounted otherwise.

This plan of proceeding we have never found to fail, when a fair allowance of time has been afforded for the experiment; at least so far as giving the scholar the power of correct utterance may be called success: but strange as it may appear, it is frequently much more easy to induce the capacity for speaking without stammering, than the inclination. The reconciling power of habit extends even to this malady, and instances are by no means rare of persons who, after becoming able to speak fluently with very slight self-command, have slid again into their former track, apparently from not feeling the importance of the acquisition which they had made.

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It is, therefore, very important that a stammerer should be put under discipline at an early age, before his habits become fixed, and while it is possible to keep him under superintendence, until the evil be quite eradicated. Except the moral habits of children, none demand a greater watchfulness than those of their speech. Practice in speaking is so constant, that habits, either for better or worse, are soon formed. A little care by the parent would prevent much labour and loss of time to his children after life. Among the most baneful of all affectations is that of speaking to children with their own imperfect enunciation; we are examples to them, and we cannot be surprised that they should rest satisfied with imperfection, when they find us aping it ourselves.

CHAP. VI.

ON PENMANSHIP.

The most important branch of penmanship is undoubtedly the plain manuscript, which we call running hand. All the larger hands ought to be considered useful, chiefly as they tend to give the pupil more just ideas of the forms of the characters, and more correct habits of delineating them, than he could gain by studying them in the minuteness of common manuscript. The large hand, seen through a diminishing glass, ought to be reduced into the current hand, and the current hand magnified ought to swell into a large hand. But if this test be applied to Langford's copper-plate copies, or indeed to any we have yet seen, they fail. The large hands reduced appear very stiff and cramped when compared with the freedom of the running hand, and the magnified running hand, to those who have formed their taste upon the models in general use, appears little better than a scrawl.

Perhaps this want of proportion results from

a wish to make each hand perfect of itself. The artists may be of opinion that the same proportional width is not necessary in the larger hands as in the smaller ones. And this opinion is very probably a correct one; but then, as the larger hands are seldom used in real life, the power of writing them in their most perfect state would be dearly bought at the expense of the current hand. In the common methods of instruction, a current hand is rarely acquired at school, even at any age. With us, it is a point of great importance to put the pupil in possession of so useful an instrument of education comparatively early; and, therefore, if any sacrifice were necessary for the attainment of this end, we should be ready to make it; but no sacrifice is demanded. When the running hand is acquired, the pupil may, if it be thought necessary, learn to write the larger hands according to the received models; but until he has accomplished what appears to us to be the object of greatest importance, we are unwilling to perplex his ideas and his incipient habits with inconsistent exemplars and various modes of execution.

The requisites of a running hand are three; legibility, rapidity, and beauty. These are placed in what we conceive to be the order of their value.

As the use of writing is to be read, no manuscript which has not a fair degree of legibility can be called good, and the writer, in judging of the degree requisite, should recollect, that his own hand-writing must be more familiar, and of course more legible, to himself than to others.

That the power of writing swiftly is of great importance will be readily conceded. The labour which is so frequently undergone to acquire a short-hand proves that too much inconvenience is already suffered from the slowness which the present cumbrous system of our orthography, and the complicated structure of our written characters, impose upon the writer, to render any additional clog from want of dexterity in himself at all tolerable.

The beauty of manuscript it would be very difficult to reduce to principle; perhaps it would be impossible to show one, very swiftly written, and very legible, which was not beautiful. At all events, we conceive the writer would have but little reason to lament any deficiency in a hand which possessed two such valuable qualities.

The usual method of instruction in penmanship is to commence by teaching the pupil to imitate an exemplar of large hand, which has the defect before-mentioned, of not being a

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correctly magnified current hand. Thus his ideas of excellence are injured; but that is not all; for setting aside the incorrectness of the model, the scholar is generally permitted to gain a habit of forming the letters, which he has to unlearn when he begins to write swiftly. He is generally allowed to raise his pen and remove his hand at every stroke; nor does he set his pen down at the precise point at which he raised it; for supposing him to have finished a down-stroke, he springs the following up-stroke, not from the foot of the stem, but from the middle; so that, instead of preserving one uniform gliding motion to the end of the word, in which neither the hand nor the pen is ever removed from the paper, the pupil is learning a system of double leaps,—one horizontal with his hand, another oblique with his pen.

We no more see, we must confess, how the scholar can learn a running hand by such practice as this, than how he could learn to skate by imitating the jumping of a frog. In fact, he does *not* learn a current hand by any such process; and nothing is more common than to find a boy, who brings home copy-books beautifully written, fall into a wretched scrawl the moment he attempts an approach to the rapidity of real business. If

he possess a natural facility for acquiring the art, he may do so by practice after he has left school; but if he be the mere creature of instruction, he continues to scrawl through life. Thus we consider the manner in which a letter is formed to be of more importance than its abstract beauty or deformity; for who could hesitate to prefer the power of writing a plain but rapid hand to that of producing the most exquisite caligraphy at so slow a rate as to be unfit for business?

It is not our intention to enter into a detail of our plan. If the intelligent reader agree with us in our principles, he will easily conceive that means may be found to carry them into effect.

The print hands are acquired by boys without much difficulty, and are useful to them when laying down maps and plans. We accustom our pupils to construct very large letters with the ruler and compasses, according to given proportions; and when the eye is by this means well informed, they soon reduce the letters to any size without the assistance of instruments. Delineation of large manuscript letters is an excellent means of becoming critically acquainted with their forms and proportions, and being a totally distinct process from writing, no more interferes with their

habits of penmanship than is done by any other species of drawing.

The advantage of being able to write a good current hand at an early age has already been alluded to. In all schools the pupil is very often under the necessity of writing, for other purposes than that of improving his manuscript. In these cases, it generally happens that, finding the slowness of the method taught by the writing-master too irksome to be endured, he throws off all the restraint of rules, and produces a scrawl scarcely legible. With us, as he finds very little discrepancy between his rules and his wishes, he does not deviate from them, or at least not so widely; and thus the practice in the exercise-book assists rather than injures that of copy-writing. Indeed, the circumstance of teachers risking the injury of a boy's hand for life, by employing him in current-writing before he has learnt the current hand under the writing-master, shows that they consider the power of producing any manuscript, however bad, of great importance in his education; and they are right. To give only a single instance. How much more easily is orthography taught by writing than orally. In fact, the power of spelling orally must be translated (if we may so express ourselves,) into the power of spelling by the eye, before it

becomes of any use to the possessor; because, in real life, we only spell with the pen. That such a translation is not intuitive is proved by the fact, that many persons, when they have any doubt of the orthography of a word, are in the habit of writing it in different ways, and judging by the eye which of them is correct. The experience, too, of all ages proves that the memory of the eye is superior to that of the ear,* so that on every account the teacher is correct in employing his pupil in writing his orthographic lessons. Indeed, where the written exercises of a school are frequent and various, orthography may be learnt almost incidentally.

* "Segnius irritant animos," &c. Horace. The passage has been quoted so often, that we may spare ourselves the trouble of proceeding any further.

CHAP. VII.

ON VOLUNTARY LABOUR.

"EDUCATION (it is somewhere said) is like the true art of blowing a fire; it is of more importance to leave a steady clear flame, when you have done, than to make a great blaze, which only lasts while you have the bellows in your hands." We are sure our readers will join with us in forgiving the homeliness of this figure, in consideration of its truth and importance; the principle exemplified will never be overlooked by the judicious teacher, whenever an opportunity arises for its application.

We shall be disappointed if it do not appear throughout the whole of what we have written, to have been a great object with us; first, that as little coercion as possible shall be used in any stage of the pupil's education; and secondly, that even this little shall be from time to time withdrawn, as he becomes able to direct himself, so that when he leaves the school he may have matured the habit of self-government.

We have been much assisted in this design by a practice which has grown up among us, and which, for want of a better name, we call *voluntary labour*. The reader is already acquainted with our system of premial and penal marks, and he is aware that they are gained in various ways; one of which is, by study during the hours of liberty. This employment we call voluntary labour, not because it is so perfectly optional that a boy would suffer no inconvenience from neglecting it, for no boy could preserve a high place in the school without some considerable exertion of this kind, since the rank of one week in each half year is *bought* with premial marks: we call it voluntary labour, because the particular time and particular study are left to the discretion or caprice of the pupil.

It would be impossible to enumerate all the means which have been devised by the boys to obtain marks; but we may observe, that their eagerness and ingenuity, when turned, as in the natural course of things it must be, to the noble art of *money-getting*, will, if we are not mistaken, prove them worthy of treading in the steps of their progenitors.

The favourite subjects seem to be penmanship of various kinds, every department of drawing, constructing maps, making surveys,

delineating mathematical diagrams, reading books on which they prepare themselves for answering questions, writing short-hand, modelling animals and machines, filling offices bearing salaries, learning (in various languages) orations, extracts from the poets, parts in plays and dialogues, and taking reports of lectures.

This department, which is now become so important a feature in our system, took its rise from the necessity of furnishing to boys, who had no chance of obtaining marks by excelling their schoolfellows, opportunities of gaining them by working harder than those to whom nature had been more propitious. It appeared to us, that as in the common course of events this must be their lot in after-life, it would be well to accustom them to it in their early years; nor were we without hopes that their superior industry would enable them to press on the heels of their competitors, and to show them that talent alone would not be sufficient, at all times, to secure superiority. It seemed also of consequence to make imprisonment, our only corporal punishment, as rare as possible; both because it is attended with unavoidable disgrace (to which no mind can with safety be frequently exposed), and because, unlike labour, it is pain without any utility, except that of example, which appertains to all judicious penalty of whatever kind.

Our dislike to tasks and impositions is, that they must be performed with unpleasant associations: now a boy, if possible, ought never to go to a book with disgust. Sometimes the difficulty of the study, or its want of accordance with his peculiar tastes, will unavoidably generate some unpleasant feeling. This the judicious teacher will endeavour to remove; but, above all things, he will guard against adding to it from extraneous causes. By the plan before us, we have all the advantage of the labour, without any injury to the boy; for when he sits down to his desk, he feels that he is not obliged to work at that particular time, neither is he under the necessity of engaging in a pursuit from which his inclination revolts. On the contrary, his time and his exertions are at his own disposal, and the object for which he labours being to rival his companions in *wealth*, and not to work out a fine, increases instead of diminishing the feeling of satisfaction which cheers his efforts.

Sufficient attention, we think, has not been paid by teachers in general, to the fact, that irksome employment is more laborious, or at least that it sooner exhausts the strength, than exertions which are consonant to the taste and disposition of the student. Thus, in yielding, as we do, by this plan, to the inclinations

of the boys, we obtain a far greater amount of labour, than we could exact without danger to the health of our pupils, if their exertions were counteracted by any adverse feelings and desires on their parts. At the same time the intelligent reader will be aware, that as we have the power of rewarding the pupil according to the difficulty and utility of the pursuit in which he is engaged, we hold a pretty strong influence over him;—one which we have found sufficiently powerful to wean him gradually from trifling avocations, and fix his mind on objects of real importance; and this to an extent beyond our most sanguine expectations.

The *scale* of rewards is, though a silent, yet a very efficacious monitor. The patient and experienced teacher, who has a proper faith in the power of time, will expect every thing from the influence of gentle, and (if we may be allowed the expression) *quiet* motives, when they are in continual action. Nor will he altogether despise pursuits which appear, and which perhaps are, in themselves, frivolous, because they may produce the most salutary effects on the minds of the pupils. It has frequently happened to us, to receive boys into the school, whose mental powers were torpid or (so to speak) quite frozen; a state, which will be allowed by all who have tried the

experiment, most difficult to act upon. They have, however, all *thawed* under the influence of the plan in consideration. It is true their first efforts were not very promising;—perhaps they came before us in the shape of a rude model of a *hogsty*—but then, how was the boy affected? He had learnt a lesson in the invaluable art of self-application; he had tasted the pleasure of success; he had acquired property; and he, perhaps, for the first time in his life, had associated pleasant ideas with school. Still he was not, because he had surmounted a molehill, deceived by flattery into an opinion that he had scaled the Alps. The measure of his reward would at once remind him, that he might find more lucrative modes of employing his time, and engage in other pursuits which would raise him to a rank of higher consideration among his fellows. The stimulus, as it always should be, was just strong enough to produce the effect required, and no stronger.

It is sometimes objected to public education, that it cannot sufficiently consult the peculiar destination of the boy; and the objection is, to a certain extent, well founded. We think the reader will be of opinion that the branch of our system under discussion obviates this difficulty; for while the more important depart-

ments of education are carried on in classes, which demand an equal attention from each pupil, he has still motive and opportunity for employing part of his time in studies more peculiarly adapted to his future pursuits.

One of the most valuable habits of life is that of completing every undertaking. The mental dissipation in which persons of talent often indulge, and to which they are, perhaps, more prone than others, is destructive beyond what can readily be imagined. A man who has lost the power of prosecuting a task the moment its novelty is gone, or it is become encumbered with difficulty, has reduced his mind into a state of the most lamentable and wretched imbecility. His life will inevitably be one of shreds and patches. The consciousness of not having persevered to the end of any single undertaking will hang over him like a spell, and paralyze all his energies; and he will at last believe, that, however fair may be his prospects, and however feasible his plans, he is *fated* never to succeed.

The habit of finishing ought to be formed in early youth. We take care to reward no boy for fragments, whatever may be their excellence. We know nothing of his exertions until they come before us in a state of completion. The consequence is, that every

one learns to measure his powers. He undertakes nothing which he has not a rational hope of accomplishing; and having begun, and knowing that he can receive neither fame nor profit by instalments, he is urged forcibly on to the end of his course.

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CHAP. VIII.

COMPARISON OF PUBLIC AND PRIVATE EDUCATION.

If the number of books already in existence upon any topic were a good reason against new attempts, we should have no right to intrude upon the world our observations on public and private education, a subject which has employed so many able pens, both ancient and modern. It appears to us, however, that the number of works,—especially when, as in the present case, the inquiries of the authors produce results so different and contradictory,—far from showing that the labour of examination is finished, proves rather that the truth has hitherto evaded our search, or that the question changes with the times, and that the modes of education which were the best that could be adopted in one age, may yet be deservedly exploded in another. We are not vain enough to suppose that the few and casual hints which may be thrown out in this little essay can do much towards extending the public

knowledge of the subject; and yet the pile of human wisdom may resemble the cairns of Scotland, which arise, in the course of ages, from single stones piously added to the heap by the hand of the traveller.

Many of the discordant opinions afloat in the world on this question arise, no doubt, from its difficulty; but many of them also arise from unfair comparison. The advocates for private education have generally contrasted an ideal system of their own, with the actual existing plan of education which has been so long established, and which has remained stationary, whilst almost every thing else has been improved. To compare what might be, (or what theorists imagine might be,) with what is,—castles in the air with the brick and mortar tenements which are inhabited by us, "the groundlings,"—may be a tolerably sure means of disgusting us with what we have, but it is rather a questionable method of proving the superiority of their own system of architecture.

That the plan of education which now obtains in our public schools is by no means perfect, we not only allow, but strenuously maintain; but we beg our readers to distinguish between a peculiar plan of public

education and the general scheme of educating numbers together.*

In order to examine this important and interesting question with any chance of success, it will be necessary to inquire,—

1st, Whether, in the present state of things, private education is more successful than public?

2d, Whether systems of private education are improving more rapidly than systems of public education?—and

3d, Whether private education is capable, under the most favourable circumstances, of producing so much excellence, moral, physical, and mental, as public education in its highest improvement?

As to the first question, "Whether, in the present state of things, private education is more successful than public?" we can only appeal to the reader's experience; for a very fallacious estimate would be formed by counting the names of great men who have been educated by either mode, because, as Rous-

* We beg to be understood to speak only of the *plan*. The execution is another thing; and we have no hesitation in saying, that the country owes a debt of gratitude to the masters of those establishments, by whose profound learning and exemplary diligence so much is accomplished, in spite of the difficulties imposed on them by the faulty system under which they are obliged to act.

seau justly observes, "Education is intended for common minds; genius will evolve itself."

Judging then from their own private experience, do our readers find youths educated privately to possess more ardour, more industry, more solid acquirement, than others? Is the change to the world less from the study than from the school-room? Are they less dependent, better inured to hardships, or are their morals better adapted to endure the shock of society? If the experience of our readers answer these questions in the affirmative, we shall be surprised, it is true, but we shall by no means consider the matter set at rest. We shall proceed immediately to the second question, and ask if they have witnessed any improvements in private education to compete with those of Dr. Bell and Mr. Lancaster in England, and of Pestalozzi and Fellenberg in Switzerland. They will undoubtedly bring to our minds the experiments (for we are talking of facts), the experiments recorded by Mr. and Miss Edgeworth, in their inestimable work on education. Cheerfully do we admit the importance of their labours, and gratefully do we acknowledge the benefits which we ourselves have derived from them. But their general principles are nearly as

applicable to the education of large numbers as to the instruction of a private family; and when this is not the case, we fear they could only be reduced to practice by teachers of extraordinary talent and acquirement. In a word, we believe the greater number of their discoveries (if we may use the term) to be applicable to either species of education; and that what is so delicate as not to be reducible to system requires more talent for its exercise, than can fairly be expected to fall to the lot of teachers in general.

There is this great difference between improvements which make part of a system, and those which do not,—that the former can be reduced to practice, and preserved by minds of very inferior powers to those which originated them; while the latter are only available to such as approach very nearly, both in kind and degree, the minds of the discoverers themselves.

From these considerations, it should seem that public education, which, being of the nature of a science, is more reducible to system than private instruction, may be improved by generation after generation, each preserving the discoveries of the former, and adding to them; while private instruction, rather resembling an art which is more depend-

ent upon the powers of single individuals, is not so capable of continual advancement.

We come now to our third and last question, "Whether private education, in its perfection, is capable of producing so much excellence, moral, mental, and physical, as public education under equally favourable circumstances?"

The first object of education should be, we think, to render the after-life of the pupil most useful to society, and most happy to himself; the next should be to render the passing years of the pupil as happy as possible. Rousseau places the latter object first, because, he says, it is uncertain that the pupil will ever live beyond the period of childhood; but we think, that if society takes (as it does) the trouble and expense of education upon itself, and if (as cannot be doubted,) education is a valuable gift to the child, that then society has a fair claim upon the services of the future man, and that he ought to be so instructed as to render those services in the most effectual manner.

But this is, perhaps, a useless refinement; for it would not be very difficult to show, that a child, while acquiring such an education as would make him the most useful man, would be in the highest enjoyment of life.

We perfectly agree with Rousseau, that the severest evil which children suffer is the bondage which they endure. We also agree with him, that the restraints of necessity are more easily borne, than those which are imposed by the will of others. "It is in the nature of man," says he, "to endure patiently the absolute necessity of his circumstances. It is all gone, is an answer against which a child never objects, at least if he believes it to be true." *

Experience must establish the truth of this position in every mind; we all know that a child leaves off crying for the moon, years before he submits without a struggle to the commands of his parents.

The cause of this difference arises, we think, partly from the uniform regularity with which the natural restraints operate, and partly because the child observes that all around him are subjected to the same laws. If the child had ever had the moon, or if it had ever seen the moon in the possession of another person, it would not be so patient under the privation.

Sagacious parents are aware of this, and take every means of showing their children that their determinations are as unalterable as

* Emilius, Book II.

those of nature: and certainly much may be done by prudently avoiding hasty determinations with respect to children, and by inflexibly persisting in all determinations when made. The difficulty of this task is well known to all parents; and in order to facilitate the exercise of authority, they usually have recourse to general rules. Thus, for example, a child is in the habit of going to bed when the clock strikes eight. Here association of ideas is called in to aid the authority of the parent; but how difficult is it in a private family to avoid motives, and strong motives, in the minds of both parent and child, for the occasional violation of this rule? and when the rule has been a few times disregarded, farewell to the association of ideas. But, supposing the rule never to be broken, even then it is felt to be a hardship; because the child perceives that no one but himself is subjected to its coercion. How much more easy is the obedience of the schoolboy? Instead of finding himself alone—set apart from the family for submission to rules, to which others pay no attention,—he is a member of a large community, governed by one law, partaking of the same pleasures, and subjected to the same privations; and if, in addition to that undeviating regularity which governs the schoolboy

by the power of association, and that obedience of numbers which impels him by the love of imitation, we add the recollection, that he and his comrades enact their own laws, and that they have no force but by the consent of those who obey them,—their gall and bitterness evaporate, and the young legislator feels himself called upon for "a proud submission," and "a dignified obedience." We have often had boys brought to us with a character for rebellion worthy of a Wat Tyler, who, upon being put into the school, have submitted to the regulations, not only without a struggle against them, but apparently without a struggle with their own feelings.*

One or other of these motives applies to boys of all ages; if they are too young to understand the mysteries of legislation, the love of imitating the actions of older boys is quite sufficient to produce the desired effect; and if they are too old to be sufficiently moved by the love of imitation, then the feeling that they had a share in framing the laws increases in strength.

* "Une règle invariable dans la distribution du temps," says M. Pictet, speaking of the pupils of Mr. Fellenberg, "rend inutile les moyens nécessaires ailleurs pour contraindre ou réprimer. Les enfans se sentent libres parce qu'ils n'obéissent qu'à la force des choses, et que le caprice ne les atteint point."

We have dwelt the longer on this excellence which public education has over private, because it affords us an opportunity of showing, that upon the very points which Rousseau, the great advocate for private instruction, considers most important, our means are superior to his:—but controversy apart, the advantage is very great. How much of the happiness of children, and even of parents and teachers, is constantly sacrificed in struggles for power? or when, by extraordinary fortitude in the parent or tutor, his empire is confirmed, how often is he forced to do violence to his best feelings, in leaving children to suffer inconveniences, from which, if he had thought it right, they could so readily have guarded them?

"Am I desirous," says Rousseau, "to teach Emilius to wake at a certain hour, I say to him, 'To-morrow morning, at six o'clock, I propose the diversion of angling, or I shall take a walk to such a place; will you be of the party?' He consents, and desires me to wake him. This I either promise or not, as occasion may require. If he wakes too late, he finds that I am gone out. Hence he sees his misfortune, if he does not learn to wake soon another time, without being called." *

* Emilius, Book II.

All this may be very right; but we fear (we had almost said hope) that few parents could be found of sufficient nerve to leave a child to bear the weight of his disappointment. We have also a lurking apprehension that the feeling excited towards the parent in the mind of the child, by the exercise of such cold-blooded virtue, might outweigh all the value of the lesson. In a school it would soon be discovered, whether or not it is reasonable to expect a child to awake without being called; if it were decided in the affirmative, a penalty would be affixed to the breach of the law, which not being levelled at any one in particular, would be borne by the defaulter without a murmur. We know that Rousseau would lay great stress on the circumstance of the penalty accruing naturally from the fault; but does the child think it at all natural, that when a word from the parent would have saved him from the bitterness of disappointment, that word should be withheld? We think not, and we consider it a great point gained both for parent and child, when such trials can be dispensed with.

Many of our readers will be reminded by these observations of Miss Edgeworth's little story of the bluejar, which Rosamond is permitted to buy of a druggist for a flower-pot, with

the money which had been originally intended for the purchase of a pair of shoes. The disappointment of the little girl, when she finds that the colouring matter is not in the glass, but in the liquor which it contains, and the many misfortunes into which she falls for want of her shoes, are admirably told.

We feel, however, the same objection to this, as a *real transaction*, that we do to the treatment of poor Emilius. Considered only as a story, it is excellent. There the little reader sees in a few minutes a train of consequences, which are supposed to take up several days in unfolding. We have certainly no objection that our pupils should see the ill consequences of an imprudent choice, nor indeed that they should feel them; but we think that even the important knowledge so attained, (and that it is important we readily grant,) will be dearly bought, if it weaken, even in the slightest degree, the affection of a child to a parent.

To cut off children from all intercourse with servants is considered by some authors a very important object; and so it is, if it can be done without teaching them to despise their servants, or to consider them as an inferior race of beings, of which we think there must be great danger in a private family. In a

school, if the buildings are well arranged, opportunities for private communication may be readily prevented: indeed the comparative smallness of their number, and their full employment, necessarily preclude any great degree of intercourse, especially when the occupations of the pupils themselves are sufficient to fill up their time, and supply their minds with subjects of interest. It is from the idle, and consequently dissolute, servants of the rich, that bad morals are learnt. The laborious domestics of a school have neither leisure nor inclination for the work of corruption.

The undue ideas of self-importance which a child must gain in a course of private education form a very powerful objection against it in our minds. To be the object of constant attention, as the Emilius of Rousseau must have been, would, without any vanity on his part, lead him into the error of supposing that himself and his education were the great business of the world; especially if we take into account the cumbrous conspiracies (for we can call them by no other name) that were formed against him; some of which the boy, unless he had been an idiot, must have discovered. In one instance, all the neighbours and the *boys of the street* are trained to act

against the little urchin, who wanders out of his father's house unaccompanied by his tutor. This adventure is justly ridiculed by the Edgeworths, who are well aware of the liability of private education to produce the feeling of which we speak, and are constantly warning parents to beware of it; but it is almost in vain to guard against natural tendencies. The teacher who would do his duty, towards even one child, must have that one nearly as much in his thoughts as the master of a hundred; perhaps more, because of the difficulty of governing and employing him by the aid of system: and this attention must, unless the parent or tutor put a very close and unnatural restraint upon his feelings, continually discover itself to the pupil. In a school, a boy must be left more to the operations of his own mind; and, without any neglect, he is obliged by circumstances to use his own judgment, act upon it, and bear the responsibility of his choice. Figures are not arguments, or we should say, that at home the plant is in the constant sunshine of observation; at school there is a pleasant and useful variety of night and day.

At school, too, a boy is a member of a community; at home he bears but one relation to those around him—that of inferior. At school, he is sometimes inferior, sometimes

equal, sometimes superior. He sometimes listens to the opinions of his master; sometimes he discusses a question with his schoolfellows, and with the freedom which one boy feels and uses towards another; and sometimes he fills the honourable situation of teacher. Whoever has closely studied the human mind will be aware, that the trains of ideas excited in it by the consideration of the same subject in these three separate characters are very different. It is true, that where a family is large, this end is in some measure gained; but the reasons which prove that it is better to teach several pupils together than one, will also go to prove that the advantage increases with the numbers. In a family it can but rarely happen that a child ever finds his equal; he is either older or younger than his brothers and sisters, and generally either superior or inferior. Indeed not only the numbers of a school are required, but that school must be a large one, before a boy can be at all times fairly matched with his equals; and mistaken as our views may seem to those who disapprove of competition, we consider it of more importance that a boy should mix with his equals than that he should have any other society whatsoever.

It is a general law of our nature, that the closer the resemblance between two beings, the more powerful is the sympathy between them. We should feel more horror at seeing the hand of an ouran-outang struck off with an axe than at seeing such an operation performed on the paw of a dog; but neither of these sights would afflict us so much as to witness the mangling of a fellow-man by such a process.

If we carry forward this principle, we shall find that the more closely our companions resemble us in age, in taste, and in avocation, the more we are pleased with their society, the more we are influenced by their example, and the more complete is the tendency to competition between us. And here we join issue with Rousseau and the Edgeworths, though not without some trepidation: we should certainly feel more at ease in agreeing with them.*

* We have lately read the Life of Mr. Edgeworth, and we find that, in common with others, we had somewhat mistaken his opinions and those of his daughter on the subject of this chapter. Mr. E. says, in a letter to the Editor of Dr. Rees's Cyclopædia, " I most earnestly deprecate the conclusion that has been drawn from our books, that we recommend in general private education for *boys*. We know that, in general, private education is impracticable, and that it requires an uncommon coincidence of circumstances to make it in any case advisable."—*Life*, vol. ii. *p*. 393.

These writers have perhaps overrated the danger of competition, by observing its effects in private families. But the deductions drawn from observations in private families must not be applied without consideration to schools. In a family, the station of every child is settled by its birth, and every child is expected, and feels that he is expected, to maintain it. All competition with him by those who are younger he resents as an attempt to deprive him of his rank; and all his endeavours to compete with his elders are resented by them for the same reason; whereas in a school, rank is not assigned by any such criterion, and cannot be where the gradation of age is imperceptible, and where the boys at their entrance are in such very different states of preparation.

In a well-regulated school there are so many paths to be trodden, that there is no danger but that the little student, whose ambition has been wounded in one will recover his spirits by success in another; meanwhile he is not reduced to the alternative of either renouncing society, or of making his rival his companion. At home, the victor and the conquered most constantly meet, and the latter must endure all the triumph of the former. At school that triumph is greatly moderated by the chance of

defeat,not perhaps from the former antagonist, but from others. The spectators, too, at school would soon cease to sympathize with the successful competitor, if he plumed himself unreasonably upon his victory; and they, from their number, have a power which must have been witnessed to be fully appreciated. In point of fact, we believe we may safely appeal to any public teacher for the perfect innocence of this dreaded principle. Indeed even among adults, whose feelings, especially of anger, are more lasting than those of children, we find that wherever there are sufficient numbers to protect the parties from the *necessity* of associating together, the most serious and ardent struggles for pre-eminence produce no deadly feelings of animosity. How common is it, on the death of a conspicuous individual of any party in the State, for his former antagonists to speak of him in terms of kindness and praise?

Dr. Clarke, the traveller, relates, that when the English and French armies were opposed to each other in Egypt, the videttes on either side were in the constant habit of crossing to each other for water; and yet the competition between England and France has been of standing enough to produce all the ill effects which competition can produce. Indeed it is worthy

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of remark, that whatever rancour is excited by competition, is seldom felt by competitors themselves, but by their partisans. Mr. Pitt and Mr. Fox never felt, we are persuaded, so hostile to each other, as their friends did for them. Does not this fact show that competition carries off the baser feelings, and leaves a generous emulation in their place? To adduce a *rougher* exemplification; how frequently do two men, who have been quarrelling, and who have agreed to fight in consequence of their quarrel, shake hands before they begin their combat? This may, perhaps, in some instances be affectation; but if it were never sincere, affectation would not take the trouble to produce a counterfeit. Nobody would be imposed upon by base coin, if there were none other in circulation.

We have already, in another part of this little work, shown how far we are willing to depend upon *stimuli*, and that we by no means expect those magical results from emulation which some writers would attribute to it; but effects are sometimes referred to emulation, of which it cannot fairly be considered the cause; and where we have the advantage without the ill effects of the stimulus.

Boys, like men, and perhaps like all animals, have a great indisposition to make exertions, unless they feel a tolerable certainty of success; now the exertions and success of their fellows in age and capacity form a kind of standard for them, by which they judge of their own powers. This standard a boy at home wants; nor is it less necessary to the teacher. To estimate exactly what a pupil of given age, talent, and acquirement, ought to accomplish in given circumstances, is one of the most difficult problems the master is called upon to solve. Need we say, that many experiments upon the powers of many boys are necessary to give him the requisite experience?

Parents often mistake with regard to the powers of children: sometimes they expect them to do what no child ought to be expected to do, and sometimes they consider them quite incapable of performing tasks to which they are fully competent. The disposition which they have to consider their own offspring as prodigies is often a source of great misfortune to the poor children; and the parent, in the bitterness of disappointment, frequently places his child as far below the just estimate of his talent as he had fondly raised him above it. Godwin well remarks, that the intense interest which a parent feels in the improve-

ment of his offspring frequently renders him totally unfit for the office of teacher. In fact, extreme attention is almost sure to counteract itself; children cannot be manufactured into scholars. Education rather resembles agriculture, and the tutor must take care that he does not fall into the error of plucking up the sprigs of knowledge which he has planted, in his anxiety to ascertain if they have taken root.

In a school, a boy naturally dull may, by remaining for a very long time in the lower classes, acquire a great deal of real information. We have seen instances of boys, who entered with the reputation of being idiots, and who were almost so in reality, rise in the course of time, by dint of an uninterrupted study of elements, to a very respectable station among their companions. We firmly believe that the patience of no individual on earth could have held out against the stupidity of these unfortunate children, if he had had no other objects to engage his attention: and if the boys themselves had attended their studies under the feeling that their teacher's anxious eye was always watching their movements, we feel but little doubt that their minds would not have been in that state of perfect calmness, so necessary to the correct performance of

any mental exercise by persons of weak intellect. By studying with their juniors, they always had the advantage of companionship; occasionally they found opportunities of distinguishing themselves, and of tasting the pleasure of success. It might be thought that they would be overwhelmed with disgrace by filling a station so much below their age; but schoolboys very soon learn to measure each other by their powers instead of their age, and are too much accustomed to disproportion between talent and years, to feel much surprise even at an extraordinary instance of it.

The use of what might be called oblique instruction is by no means to be despised. "At home," says Quintilian, "a boy can learn only what is taught him, but in schools he can learn what is taught others." Children often acquire more information by attending to lessons in which they have no feeling of responsibility than in studying their own They have by this means an opportunity of retracing their steps, without all the drudgery or disgrace of going over the ground again in their own persons. With us, this is practicable without supposing a boy to neglect any of his duties, because, by our arrangements, some boys are engaged and others at leisure,

during the greater part of the day. In the great variety of studies which must be followed in a large school to suit the various dispositions and views of different boys, each pupil learns something even of those branches to which it forms no part of his duty to attend. The information so gained must of course be slight, but it may be far from unimportant in after-life. A striking illustration of this position may be found in the report of a judgment delivered by Lord Kenyon. The point to which his Lordship was addressing himself was the impolicy of rating the tolls upon a canal to each parish through which it passed, according to the quantity of land covered with water. "Hard," said his Lordship, "would be the lot of the officers who are to make the rates in these several parishes; they would have to measure not only the length but the breadth of the navigation in each respective parish, and have to ascertain with precision the exact quantity of land covered with water. Those difficulties would be insuperable, and it would be in vain to think of rating at all if such were the rule."—*Rex* v. *Page*, 4 *Term Reports*, 543.

Now of course we do not presume to impugn the correctness of Lord Kenyon's opinion in this case, which on other grounds might be

very just, but certainly, as far as it depended on the reasoning we have quoted, nothing could be more fallacious. If the Learned Judge had ever conversed with a surveyor for five minutes in the course of his life, he must have known that the operation which he considers so insuperably difficult was performed daily. We have boys of fourteen, who could give practical proofs that this obstacle to the proposed method of rating had no existence but in his Lordship's imagination.

We have always found that whenever, by extraordinary attention, any study has been carried to a high pitch of excellence among our pupils, it has been sustained at that pitch for years without much labour on the part of the teacher. We have also found, that in those branches of education where it was most easy to record the acquisitions of the pupil, as in penmanship or drawing, this effect was most permanent; and, on the other hand, where the record was impossible, as in elocution, the effect was transitory.

Every school has a traditionary history, which ought by no means to be lost sight of by the master. He should take care to preserve as many little monuments of the talent, and industry, and virtue, of his pupils as he can collect; they will have a similar effect in

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the minor world to that which the events of a greater history have in the world of men.

It must not, however, be concealed, that if the conduct of a school has furnished many facts of an opposite kind, the master will have reason to wish that its history could be forgotten; unless his pupils, when they hear of the misdeeds of their predecessors, could also learn the punishment which the offenders had endured in their little community, or the pain they had experienced in the world as consequent upon the bad habits which they had contracted, or the bad principles which they had imbibed. History may be injurious in a school, as it often has been in real life; but where there is power there is the element of utility. It is the fault of the master, if the history of his school is not useful to him.

It would be an endless task to point out all the advantages which may result from the similarity between the little world of a school and society at large. That some evils may and do arise from the same cause, we are also well aware, but this admission does not affect the question. Freedom is not unattainable, because some nations present examples of despotism. We do not wonder that persons, who have only seen very defective plans of public education, should prefer to have their

children taught at home. It is difficult to separate what is incidental to a system from what is essential. We prefer a state of society for all individuals, whether children or men, and we feel no hesitation in laying it down as a general position, that all individuals are happier together than alone. But society might be so constituted, that a man would act wisely to become a hermit; and schools may be so governed, that a parent would best fulfil his duty by teaching his child at home.

Great stress is generally laid by the advocates of private education upon the superior morality of their pupils to those at public schools. We have already attempted to show, that the defects which are so unfavourable to moral character ought not to be considered as inherent in every system of public education.* Perhaps the detail into which we then entered, respecting the various motives to moral conduct which might be induced, and the various checks to vice which might be enforced, will be considered as doing something towards rescuing public education from the obloquy which has been cast upon it: if so, we may be allowed to ask how a boy, in a system of private instruction, would meet with

* Chap. III.

so many opportunities of exercising the manly virtues, as in intercourse with the numbers of a public school? In such a situation, too, a boy learns not only by the pain and mortification he endures as the consequences of his own transgressions, but he has an opportunity of learning without the bitterness of experience. So, perhaps we shall be told, may a boy at home, by the medium of books; but what story, even though true and believed to be true, can ever carry the interest of a real transaction? But if, instead of leaving him a mere spectator, we elevate the pupil to the rank of a juryman or a judge, do we not provide for a very different impression upon his mind to any that can be produced by mere reading? To preserve the effect of the punishment he has assisted to inflict, he must abstain from a breach of the laws in his own person: we give him an important character to support, and call upon him not to disgrace the judge by the misconduct of the schoolboy.*

* One of the effects of employing boys in offices of power we had not anticipated when we constructed the system. It is, that they learn to weigh the pleasures against the toils of ambition. We can assure our readers, that there is sometimes considerable difficulty in filling the requisite offices, from the reluctance which the elder boys often feel to encounter the labour and responsibility of them. This early experience of the troubles of

After having said so much on the subject of morals in that part of our little work already referred to, we are unwilling to intrude further on the time and patience of our readers. One point more, and we have done.

We have before alluded to an opinion which prevails among parents, that a small school is better than a large one. But if there be any force in the arguments which we have adduced, this opinion must be founded in error. The system of jurisprudence which we have found so efficacious could not be carried on without a large number. Public opinion, too, which we have found so powerful an ally, is evidently dependent on number for its strength. That exact classification of students with others of equal powers and attainments, the utility of which we have already attempted to show, cannot be produced without the aid of very large numbers; and indeed it must draw

power, joined to the freedom from all unnecessary restraint, wonderfully tempers that impatience of control, those aspirations after manhood, which are the cause of so many evils, both to parents and children. We cannot say with the poet, that

> " —— The brisk minor pants for twenty-one;"

for we find rather a disposition to remain in the trammels of a school; and we have had frequent instances of boys preferring very earnest petitions to their parents, to suffer them to stay after the time fixed for their departure.

nearer to perfection with every addition to the school.

In short, a small number of boys can no more enjoy all the advantages of a large body, than a few soldiers can go through the evolutions of an army.

The great principle of the division of labour is of course more applicable to a large number than to a small one. It seems no more probable that the same person should be perfectly qualified to teach two arts or two sciences, than that he should be able to follow two professions. This is felt, and the usual remedy is to engage the assistance of occasional masters; but we put it to the recollection of our readers, whether the same attention is ever paid by the pupil to these occasional teachers, as to those who continually reside with them, and whose labours are united into system. With sufficient numbers all these defects might be supplied. The head master, too, ought to be relieved from all necessity of taking any department of teaching himself, in order that he may be at liberty to attend to the regulation of the whole; to watch for opportunities of improving every part, and, by engaging his pupils in conversation, to seize the proper moments for exciting them to inquiry and reflection: in a

word, by giving them all that instruction (so difficult to describe and so easy to conceive,) which is not reducible to system, to unite all the advantages of both public and private education.

APPENDIX.

CASE OF APPEAL.

Our little Courts of Justice not unfrequently furnish cases of considerable interest; and as we are always willing to make the resemblance between our microcosm and the world at large as close as possible, at least in every useful point, we are trying to collect a volume of Reports. As all the boys are expected to be present during a trial, to give importance to the proceeding, the time of such as are capable of the task must be profitably employed in taking notes. A useful effect may also be produced upon the parties; and these records will be valuable acquisitions for those boys who wish to study the laws, and enable themselves to conduct the jurisprudence of the school. We shall detail a case which lately occurred,* not because it is the most interesting which could have been selected, but because there will be nothing in its publication to hurt the feelings of any person engaged in the transaction.

It would be in vain to attempt any concealment of the fact that our pupils, like all boys in the full tide of health and spirits, do not always see the folly of an appeal to the *ultima ratio regum* in so strong a light as that in which it *sometimes* appears to older eyes; and resort is now and then had to trial by combat, in preference to trial by jury. The candid and experienced teacher, who knows the difficulty and the danger of too rigorously suppressing natural impulses, will not censure us for en-

* In April, 1821.

deavouring rather to regulate this custom, than to destroy it altogether. In the hope of lessening the number of those *fracas*, (never very large) a law was proposed, which the committee adopted, to render it penal for any person, except the Magistrate and the Constables, to be present at a battle. Six hours' notice must be given by both parties, and a tax paid in advance. During the interval, it is the duty of the Magistrate to attempt a reconciliation. These regulations were intended to give opportunity for the passions to cool, and to check the inclination for display which is often the sole cause of the disturbance. We consider the effect on the minds of the spectators as the worst part of the transaction. There is something dreadfully brutalizing in the shouts of incitement and triumph which generally accompany a feat of pugilism. Neither boys nor men ought ever to witness pain without sympathy. It is almost needless to say, that, with us, fighting is any thing rather than a source of festivity and amusement.

To return to our story.—A day-scholar, whose father's grounds adjoin ours, was discovered by the Magistrate to have witnessed a battle from a tree which he had climbed for that purpose. The Magistrate fined him. He appealed, and the question of his liability was argued at some length before the Committee.

The ground which the appellant took was, that no day-scholar could be amenable to the laws of the school, except during the hours of business, or while on the premises belonging to the school, and that the alleged offence was committed out of school hours, and on his father's land.

Public opinion ran in his favour. The plea that he was on his father's land seemed to have great weight

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with his schoolfellows. To fine a boy under such circumstances appeared to them like an attempt to invade the paternal sanctuary, and the motion for quashing conviction of the Magistrate, at first received the support of several members of the Committee.

The attending Teacher saw that it would be necessary to call the attention of the Committee to general principles, and proposed as an amendment to the general motion, the following resolution, "That it is desirable that the laws should be obeyed at all times, and in all places." In support of this amendment he argued, that as the laws had the happiness of the school in view, a breach of those laws must certainly be in some degree destructive of the general good. That to allow this in certain individuals would be injurious to the great body, but still more so to the individuals themselves; and that what was wrong in the school-room or on the playground at eleven in the morning, could not be right in the fields at six in the afternoon. In conclusion he said, "Whether or not we have the power to fine a person for a breach of our laws when he is at a distance from the school, is a question which it is not our present business to determine; but I firmly believe that our laws are calculated to promote in the highest degree our welfare, and I wish the advantages to be derived from obeying them to be as widely diffused as possible."

The amendment was carried unanimously.

Having determined "that it was desirable that the laws should be obeyed at all times, and in all places," it was necessary in the next place to ascertain whether it was not a part of our law that such should be the case. With this view, an amendment was proposed which declared, that such was the intention of the law, and in

support of it cases were cited in which day-boys had been punished for offences committed at a distance from the school. It was also insisted, that in no single instance had the laws made an exception in favour of the day-boys. They universally begin by saying, that, if "any one," or "any pupil," or "any boy," shall commit such and such an offence, &c. and not "any boarder," or "any day-boy then at school."

The second amendment was also carried without opposition.

The question was now confined within very narrow limits. The Committee had declared that it was "desirable that the laws should be obeyed at all times and in all places;" and also, that by law no exception was made in favour of day-scholars. It only remained therefore for the Committee to consider, whether the police of the school had the power to enforce the laws. It was argued that in this instance they had been enforced, for that the fine had actually been paid, and that unless the Committee interfered to prevent it, they would continue to operate, as they had done, for the welfare of the school at large, and for the ultimate advantage even of the individuals who might at first appear to be injured.

The amended motion was now put, and the conviction was unanimously confirmed.

This detail will furnish the reader with a more correct conception than we could otherwise have given him, of the opportunities with which the sittings of our little Committees furnish the members for making some important acquirements. In the first place, they study the art of reasoning, and that too under very favourable circumstances; being fully acquainted with the facts on which they are called to exercise their judgments, and

seeing them in all their bearings. We believe that intimate acquaintance with the facts of which we speak to be the first and most important element in practical logic. Reasoning, strictly speaking, being no more than the art of tracing analogies and differences. The *reality* of the business in which the students are engaged is very valuable, inasmuch as it furnishes them with strong motives to exert all their powers in the investigation. The matter at issue " comes home to their business and bosoms ;"— it may deeply affect their own interests, and will not pass unnoticed by their constituents ; among whom the question will be again discussed, and the Committee-men will in conversation have to defend the opinions they have officially expressed. Thus every argument is well canvassed in their minds, and the ideas remain under consideration for a sufficient time to become permanently fixed in their remembrance.

The power of public speaking is also in some degree acquired, and, we hope, without the countervailing evils which have been so justly deprecated. The great defect of all artificial methods of learning the art of debating is, that it is seldom of any real importance to either speaker or hearer, on which side the question under discussion is determined ; consequently, the speaker is more anxious to display his own talents, than to convince the audience ; which, on its part, wishes rather for amusement than instruction, or seeks the latter only by watching the conduct of this mental fencing-match, in order to learn the most skilful manner of handling the foils. Every one who addresses the company assembled, feels that he shall be more applauded for agreeably wandering, than for pointing out and following the best and straightest road. In short, discussion, instead of being

a means employed to gain an object, is the end itself. The orator, if such a name is to be so degraded, rises not to gain the votes of his hearers, but to make them laugh and clap their hands; and, as this is most easily done by advancing smart sophisms, and uttering well-delivered absurdities with mock solemnity, we may readily conceive how little the powers of investigation can be exercised and improved by such practice as that of spouting clubs and debating societies. No doubt there are many exceptions to these remarks, but the vice we complain of is, we fear, inherent in some degree in the nature of the institutions, although by care in the choice of members, and the selection of an audience, it may, in a great measure, be counteracted.

We must not forget to state the advantages enjoyed by the Teacher's attendance on the sittings of our Committees. He becomes most intimately acquainted with the minds of his pupils. He sees their difficulties and their errors in a strong light, and is placed in a situation for addressing himself more completely to the state of their wants than he could be, unless they were thus induced, and almost compelled, to disclose all the workings of the mental machine. In general, nearly every person who knows a boy at all, has an opportunity of becoming better acquainted with him than his instructor. No wonder, considering the many painful sensations which the latter, in his various offices of accuser, witness, judge, and executioner, is compelled to excite. We are happily relieved from these difficulties, but we still seize with avidity every means by which our pupils may be induced to develope their minds to our view, feeling that our acquaintance with their springs of thought and action can never be too accurate and complete. The

votes at the conclusion of the debate show us the measure of our success. Every influence, except that of mind, is, we trust, out of the question: we do not always carry a majority with us; and this fact gives us hope, that when we do, a sincere effect has been wrought on the convictions of the boys.

To conclude, we must in candour acknowledge, that we search more industriously for arguments and illustrations to support our opinions, than we should or *could* do, under other circumstances. The effect on the mind of the Master is not a bad test of any method of education.

THE GYMNASTIC SOCIETY.*

THE following account of the erection of a Tool-house is extracted from the "School Records," a register containing accounts of the most remarkable occurrences in the school, which is drawn up under the direction of the school-committee.

"ERECTION OF THE TOOL-HOUSE.

"The Committee of the Gymnastic Society having recommended the erection of a building for the reception of a set of carpenters' tools which they intended to purchase, and * * * * * * † having kindly offered to find the materials, it was agreed that a building for this purpose should be erected, and * * * * ‡ and some others, at the request of the Committee, made out a set of plans, which were

* See Chap. II. p. 56.

† The conductors of the school.

‡ One of the boys.

approved of, and preparations were made for commencing the erection.

"Accordingly, on the 6th of August, 1821, the boys having obtained a half-holiday for the purpose, the ceremony of laying the first stone took place. The soil having been removed for the foundations, a stone was procured, and seats were arranged about the place for the accommodation of spectators. The boys then assembled on the play-ground, from which they marched in procession to the court, accompanied by the band. The stone was laid by Messrs. * * * the Judge, and * * *, the Magistrate, and under it were placed in a tin box a specimen of each kind of penal marks;* also a writing, stating the date of the ceremony, and the purpose for which the building was intended. The ceremony concluded by the band striking up "God save the King."

"Most of the boys performed some part or other towards the completion of the building, but * * *, who, on account of a weakness in his eyes, was not allowed to engage in his usual employments, undertook to execute the chief part of the work.

"By about the latter end of October the tool-house was completed, no workman having been employed either in the masonry, carpentery, slating, glazing, or painting; or, indeed, in any part of the erection whatever.

"The whole cost of the building was about ten pounds."

"During the erection of the tool-house, the Committee purchased a set of carpenters' tools for ten pounds, for the use of the members of the Gymnastic Society."

It is worthy of remark, that though this tool-house was literally erected without the assistance of any workman, yet a stranger would not at first sight be struck with any distinction between this and the other erections about it, lately constructed by professional builders.

Voluntary Resignation of Power.—It has before been stated,† that the boys do not exhibit that ardent wish to possess power and influence which might

* See Chap. II.

† Chap. III.

be expected. A remarkable circumstance in corroboration of that statement occurred very lately.

Heretofore, when any boy was accused of disrespectful behaviour to a Teacher, the case was examined by the Sub-Committee, which consists of the Judge and Magistrate for the time being. These two boys determined the fine to be paid, their decision being subject, as all their acts are, to the *veto* of the Head Master, and open to an appeal from them to the General Committee. They had also the power of directing that the individual should take his trial before the Court of Justice; but this was only to be done in extreme cases, and an instance never occurred of the power being used. It sometimes happened that the penalties enforced by this body were not such as to satisfy the Teachers. We believe that the members of the Sub-Committee had every wish to do justice between the parties, but cases of this description appear to be peculiarly difficult. Whether an individual be respectful or not in his behaviour will depend very much on his looks, the tone of his voice, and other nice distinctions, which demands considerable skill to extract from the witnesses; and even supposing the Judges to be acquainted with all the facts, to estimate them correctly requires an experience which boys cannot be expected to possess. It is necessary, in short, that they should conceive themselves exactly in the situation of the individual offended, and from doing this they are obviously disqualified by the disparity in age.

The Sub-Committee appeared to be aware of these objections; and, at their own request, the power of deciding upon cases of the above description was transferred to the Teachers themselves. This alteration was made by the General Committee on the 10th of December,

1821, by the passing of the following Resolutions, which were introduced by the Judge:—

"On the report of the Sub-Committee, that it was their wish that the duty of punishing disrespectful behaviour to the Teachers should be placed in other hands,

"Resolved, That it appears desirable to the General Committee, that this power should, for several reasons, be placed in the hands of the Teachers themselves.

"Resolved, also, That the law on this subject already in force be repealed, and that the following be substituted:

"The penalty for this offence shall be from fifty to two hundred penal marks, and when any boy is charged by a Teacher with disrespectful behaviour towards him, such boy shall, within six hours after the charge shall have been made, request any two Teachers he may choose, to act as arbitrators in the affair, and the power of punishing the offender shall lie with them alone. If such nomination should not be made within the appointed time, the power of selecting the arbitrators shall be with the Teacher against whom the offence is committed. Either party may appeal against the decision of the arbitrators to the Conference of Teachers,* giving the

* This is a weekly meeting which the Teachers hold for the purpose of making such arrangements respecting the conduct of the school as fall within their province. Here the observations which each Teacher has made in the course of the week, on the advantages or defects of different plans, are laid before the body: improvements are suggested and canvassed, and the great principles of Education, as the course of debate brings them under view, are developed and thoroughly discussed. In addition to the advantages which we draw from thus, at stated times, examining the affairs of the establishment, the younger members regard this meeting as furnishing them with a valuable opportunity of learning the science of their profession. Their daily practice in the business of instruction affords them the means of accurately observing facts, while the inferences which they are assisted in drawing by the remarks of their elder colleagues, enable them to correct their opinions, and arrange their ideas in a systematic form.

same notices as are required in case of an appeal to the Committee.

"The decision of the Conference shall be final.

"The arbitrators, or, in case of an appeal, the Conference, shall have the power, in an instance of gross disrespect, to commit the offender for trial before the Court of Justice."

Regularity of Attendance.†—From our mode of ascertaining and recording the absentees from the general musters, which take place three times in each day on the boys coming into the school-room, it will be seen that, in order to be regularly punctual, great care and precision are necessary on the part of the boys, as the moment the bell ceases to ring, the doors are closed, and no one is allowed to enter until after the muster. Notwithstanding the difficulty of the task, three boys were present at all the musters between Midsummer and Christmas, 1821; neither illness, engagements with their friends, nor any other cause whatever, having prevented their uniform punctuality. This good example has had its effect on others, as there are many boys whose punctuality, as regards the present half-year, has been hitherto uninterrupted.

Attendance at the School after the Vacations.—In order that the business of the school may recommence without delay, it is a great object with us, that the first muster after each vacation should be as numerously attended as possible. To accomplish this, the rank of each boy for the first week is made to depend upon the time of his arrival at the school; and as a further inducement, certain rewards of penal marks are given to those who are present at the first muster. So effective

† Chap. II. p. 32.

are these regulations, that after the last vacation (Christmas 1821-2), nearly a half of the whole number of boarders slept in the house the night before the school opened, in order to be ready for the first muster, which was appointed for ten o'clock the next morning, when they were joined by many of their companions. This attendance, we have reason to believe, was in every instance voluntary on the part of the boys.

Mental Arithmetic.—The following questions, with their answers, are extracted from the minutes of the public Exhibitions. It can hardly be necessary to observe, that the rehearsals, which are so numerous with respect to the recitations, have no place in this department. Moreover the audience is always requested to propound any questions which may occur to their minds.

Q. What is the value of 18,421 articles at 13s. 4d. each?
A. £12,280. 13s. 4d.
Q. What is the value of 25,231 articles at 16s. 8d. each?
A. £21,025. 16s. 8d.
Q. Tell the discount on £864. 6s. 8d. at 15 per cent.
A. £129. 13s.
Q. What is the square of 952?
A. 906,304.
Q. What is the square of 54¼?
A. 2,943 and 1-16th.
Q. What is the depth of a well down which a stone is 3½ seconds in falling?
A. 196 feet.
Q. What will be the moon's age on the 16th of June, 1846?
A. 23 days.
Q. The planet Vesta was discovered by Dr. Olbers on the 29th of March, 1807; on what day of the week was that?
A. On Sunday.
Q. On what day will Easter Sunday fall in the year 1827?
A. On April 15th.

Q. If I see a flash of lightning, and five seconds afterwards hear the thunder, how far am I from the thunder-cloud?

A. 5,710 feet, or 1,903 yards 1 foot.

Q. A rectangular garden, of which the breadth is two-thirds of the length, contains in area 661½ square yards; what are the length and breadth respectively?

A. The length is 31½ yards, and the breadth 21 yards.

Q. What was the time of high water at London bridge on the 17th of September, 1820?

A. Ten o'clock.

Q. Supposing a poor country labourer to be able to earn 11s. per week, what sum has he to maintain his family with during the year, if sickness should prevent his working one week in that time?

A. £28. 1s.

Q. The personal expenses of the Roman Emperor Vitellius amounted, in the course of four months, to a sum equal to seven millions in our coinage. How long would so much money support such a family as that of which we have just spoken, taking its annual expenditure at £28?

A. 250,000 years.

Q. There are about 80,000 inhabitants in the town of Birmingham, and, upon an average, about five individuals in each family, how many families are there in Birmingham?

A. 16,000.

Q. Supposing each family to spend, upon an average, £90 per annum, what is the annual expenditure of the whole town?

A. £1,440,000.

Q. You have just informed us that, according to certain conjectures, the annual expenditure of the town of Birmingham is £1,440,000. Call it £1,400,000. Then how long would the sum of money expended by the epicure Vitellius in four months maintain the whole town of Birmingham?

A. Five years.

Q. There is an individual who takes on an average one halfpenny worth of snuff per day; he began this practice when he was 20, and he is now 84 years of age; what sum of money has he wasted in snuff?

A. £48. 13s. 4d.

Q. Gay Lusac rose in a balloon from Paris to the height of four miles and three furlongs. What was the distance of his horizon when looking towards the sea?

A. A little more than 187 miles.

Q. The height of the Lunar Mountain, observed by Ric-

cioli, and called by that astronomer Mount St. Catharine, is (he tells us) nine miles. Supposing the moon to be inhabited, how far along the level surface are the lunarians able to see from the top of this eminence, the diameter of the moon being 2200 miles?

A. Nearly 141 miles.

Q. The diameter of the dome of the church of the Invalids at Paris is about 80 English feet, what is its circumference?

A. 251 feet and 3-7ths.

Q. Call the circumference 251 feet, and suppose the dome to be a perfect hemisphere, what is the superficial content in square feet?

A. 10,040 square feet.

Q. This dome is covered with gilt, what would be the expense of gilding it, at 8s. per square foot?

A. £4,016.

Q. Suppose it is 10 minutes past 1 P.M. at Quebec in longitude 71 deg. 10 min. west, what time is it at Rome in longitude 12 deg. 29 min. east?

A. 44 min. 36 sec. past 6 P.M.

Give the double of 21 as high as you can.

This was carried as high as 352,321,536 (the 24th double).

VOLUNTARY EFFORTS TO OBTAIN RANK.—It has been stated in chapter II.* that subjects for voluntary competition are occasionally offered, which affect the aggregate rank of the boys, and consequently the distribution of the prizes at the end of the half-year. At least one subject of this description is proposed in the course of each week; consequently the time for preparation is but short. The boys were lately invited to give in solutions of three geometrical problems devised for the occasion. The boy to whom the first place was given is fifteen years of age; his paper was delivered in on the fifth day after the subjects for competition were made known, and, in the mean time, he had faithfully gone

* Page 23.

through all the ordinary routine of lessons. We are fully assured that he did not receive the least assistance from any individual, and that he had not access to any geometrical work except the Elements of Euclid.

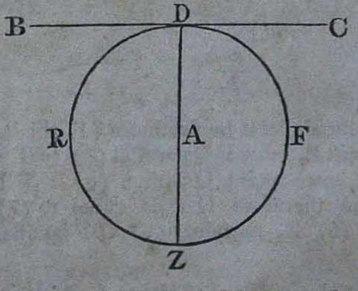
The following is a copy of the boy's solutions. It will be observed, that he has added the demonstrations, though they were not required.

PROBLEM I.

"A point and an indefinite straight line being both given to describe a circle that shall touch the line, and centre in the point."

Let A be the given point, and B C the given indefinite straight line. It is required from the point A, as a centre, to describe a circle which shall touch the given indefinite straight line B C.

From the point A, let fall A D perpendicular (1) to B C; and from the point A, as a centre from the distance A D, describe (2) the circle D F R, which circle shall touch the line BC in the point D. Let D A be produced (3) towards A, till it meets the circle in the point Z; then DZ is the diameter(4) of the circle D F Z R; and because it is the diameter, and that from its extremity D, a straight line BC is drawn perpendicular



to it, B C touches the circle (5) in the point D; and the circle centres in the given point A: wherefore a point and an indefinite straight line being both given, a circle has been described, which centres in the point, and touches the given straight line,—which was to be done.

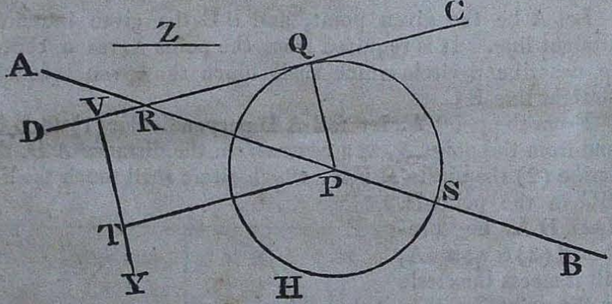
(1) Prop. xii. book 1. (2) 3d postulate. (3) 2d postulate. (4) 17th def. of Book I. (5) Cor. Prop. 16th, Book III.

PROBLEM II.

"Given two indefinite straight lines intersecting * each other; also given a definite straight line, to describe a circle that shall centre in one of these intersecting lines, touch the other, and have its radius equal to the definite line."

Let A B and D C be the two indefinite straight lines which intersect each other in the point R, and let the definite straight line be Z. It is required to describe a circle that shall centre in one of the intersecting lines, touch the other, and have its radius equal to the definite line.

In D C, take any point V, and from that point draw V Y perpendicular (1) to D C; and if V Y be not equal to Z, cut off V T equal (2) to it, and through the point T draw T P parallel (3) to D C; and if T P do not meet A B in some



point P, let it be produced (4) till it does; and through the point P, draw P Q parallel (5) to T V, and let P Q meet D C in some point Q; then (6) V T P Q is a parallelogram, and therefore Q P is equal to (7) V T; but V T is equal to (8) Z, therefore (9) Q P is equal to Z; and because (10)

* *Intersecting.* This word, which occurs often in the course of the solutions, was written *intercepting*. It may appear very remarkable, that a boy who could produce a paper like this, and who is also a good classic, should make so singular a mistake, but to those who are best acquainted with young people, the circumstance will appear least extraordinary. Some apology for the error is, that the list of problems exhibited was written in short-hand. Excepting the alteration of this word, the solutions are given here exactly as they were received from their author.

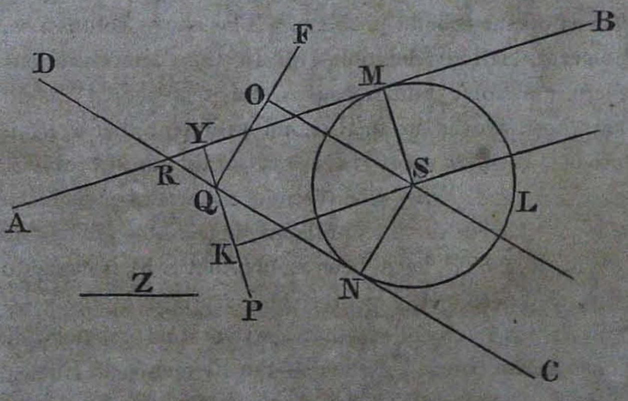
the angle Q V T is a right angle, the parallelogram T Q (11) is rectangular. At the point P as a centre, at the distance P Q, describe the circle (12) Q S H; then it may proved, as in the first problem, that the circle touches D C in Q; and it has been proved, that the radius P Q is equal to Z, and the point P, which is the centre of the circle, is in A B :—wherefore a circle has been described, which centres in one of two intersecting indefinite straight lines, touches the other, and has its radius equal to a given definite straight line;—which was to be done.

(1) Prop. 11, Book I. (2) Prop. 3, Book I. (3) Prop. 31, Book I. (4) 2d postulate. (5) Prop. 31, Book I. (6) Definition of a parallelogram. (7) Prop. 34, Book I. (8) By construction. (9) Axiom 1, Book I. (10) By construction. (11) Corollary, 46th Prop. Book I. (12) 3d postulate.

PROBLEM III.

" Given, as before, two indefinite straight lines intersecting each other; also given a definite straight line, to describe a circle that shall touch both of these indefinite straight lines, and have its radius equal to the definite line."

Let the two indefinite straight lines A B and D C, intersect each other in the point R, and let the definite straight line be



Z. It is required to describe a circle which shall touch both of these indefinite straight lines, and have its radius equal to the definite straight line.

In A B take any point Y, and from the point Y draw Y P at right angles (1) to A B. Next in D C take any point Q, and from the point Q draw Q F at right (1) angles to D C; from Q F cut off Q O (2), and from Y P cut off Y K, each equal to Z, and through the point O, draw O S (3) parallel to D C, and through K draw K S (3) parallel to A B, and through the point S, where these straight lines cut one another, draw S M and S N respectively parallel (3) to O Q and Y K,* and from the point (4) S as a centre, at the distance S M, describe a circle M L N: then that circle touches both A B and D C, and has its radius equal to Z. For it may be proved, as in the second problem, that S M is equal to Z, and that each of the angles at M and N is a right angle; and the straight line which (5) is drawn perpendicular to the diameter of a circle touches the circle: wherefore A B and D C touch the circle, and its radius is equal to Z. Wherefore "a circle has been described," &c.—which was to be done.

(1) Prop. 11, Book I. (2) Prop. 3, Book I. (3) Prop. 31, Book I. (4) 3d Postulate. (5) Corollary, Prop. 16, Book III.

This last problem might be worked more easily by first bisecting the angle B R C, and then proceeding by means of the second problem. The above solution is, however, strictly legitimate. In the demonstrations there are some omissions; as, for instance, it should have been proved in the second problem, that T P, if produced, *would* meet A B; and in the third problem, that O L and K S, when produced, would meet each other. Also in the last problem, before describing the circle, it should have been shown that S M is equal to S N. We cannot, however, be surprised at these errors, when we recollect that the work on geometry in most extensive use in schools—the Elements of Euclid,

* These letters are, by mistake, placed in the wrong order. S M and S N are drawn respectively parallel to O Q and Y K.

by Dr. Simson, abounds in omissions of the same kind.

Volunteer Class.—It was our wish a short time ago to form a class to study Greek, in addition to those already in being.

As the school-hours were already fully occupied with other exercises which could not be interrupted, it was found necessary that the time devoted to this new class should be subtracted from the leisure hours of the members. For this and other reasons, it was determined that, with the exception of two individuals who began Greek in accordance with the wishes of their friends, the class should be filled by volunteers. Accordingly, at one of the general musters, the boys were informed that there was now an opportunity for those who desired it to commence the study of Greek; at the same time it was stated, that the class would take up a quarter of an hour in each day, and that the business of this class, instead of being substituted for a task of another kind, would be exactly so much additional labour to those who joined it. They knew that they should be subject to the usual fines for irregularity in attending the class, and for negligence in its proceedings; and that no inducement might influence them but the love of knowledge, they were told, that at the next weekly arrangement of the school, when the upper places were to be given for superiority in Greek, they would not be advanced by their having thus recently joined the Greek classes, but would take their rank merely according to their proficiency in Latin, by which the lower places on the list are determined; consequently, that they must

wait for a second arrangement of this kind (more than six months), before their efforts would gain them any increase of rank.

When all the circumstances had been stated by one of the Teachers, he desired that those boys who still felt inclined to join the class would hold up their hands, and seventeen immediately offered themselves. As this was a much larger number than there was any immediate provision for occupying advantageously, many, apparently to their great regret, were obliged to wait for a future opportunity.

This is the third time a class has been raised for the same purpose, and in the same way.

FINIS.

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